

Before the
Federal Communications Commission
Washington DC 20554

In the Matter of)	
)	
Amendment of Part 101 of the Commission’s)	WT Docket No. 10-153
Rules to Facilitate the Use of Microwave for)	
Wireless Backhaul and Other Uses and to)	
Provide Additional Flexibility to Broadcast)	
Auxiliary Service and Operational Fixed)	
Microwave Licensees)	
)	
Fixed Wireless Communications Coalition,)	RM-11610
Petition to Amend Part 101 of the)	
Commission’s Rules for Automated)	
Government Frequency Coordination and)	
Conditional Licensing in the 23 GHz Fixed)	
Service Band)	

***EX PARTE* FILING OF THE
FIXED WIRELESS COMMUNICATIONS COALITION**

The Fixed Wireless Communications Coalition, Inc. (FWCC)¹ respectfully submits this *ex parte* filing in the above-captioned proceeding. The FWCC asks the Commission to update its rules governing fixed operations in the 71-76 and 81-86 GHz bands (“70/80 GHz”).

In a separate proceeding, the Commission is proposing mobile and/or unlicensed operations in the same band.² We ask the Commission to rethink some of its rules for fixed use before considering the introduction of new operations.

¹ The FWCC is a coalition of companies, associations, and individuals actively involved in the fixed services—*i.e.*, terrestrial fixed microwave communications. Our membership includes manufacturers of microwave equipment, fixed microwave engineering firms, licensees of terrestrial fixed microwave systems and their associations, and communications service providers and their associations. The membership also includes railroads, public utilities, petroleum and pipeline entities, public safety agencies, cable TV providers, backhaul providers, and/or their respective associations, communications carriers, and telecommunications attorneys and engineers. Our members build, install, and use both licensed and unlicensed point-to-point, point-to-multipoint, and other fixed wireless systems, in frequency bands from 900 MHz to 95 GHz. For more information, see www.fwcc.us.

I. BACKGROUND

The existing rules governing non-Federal use of the 70/80 GHz band date back to 2003.³ They require licensees to secure a non-exclusive, nationwide 70/80 GHz license from the Commission and then register individual links with a third-party database manager.⁴ The Commission established this “light licensing” scheme after determining that the “highly directional, ‘pencil-beam’ signal characteristics permit systems in these bands to be engineered so that many operations can co-exist in the same vicinity without causing interference to one another.”⁵

Paths at 70/80 GHz must be placed into operation within 12 months, rather than the 18 months for other microwave bands.⁶ Priority between competing links depends on which link was first registered with a database manager.⁷ Notices of construction need not be filed with the Commission.

This regime has fostered innovation and successfully promoted use of the band. Use continues to grow. In June 2014, the Commission noted 270 nationwide licensees that have

² *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services*, Report and Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd 8014 (2016) (*24+ GHz Further Notice*). The comments largely oppose mobile and unlicensed services.

³ *Service Rules for the 71-76 GHz, 81-86 GHz, and 92-95 GHz Bands*, Report and Order, 18 FCC Rcd 23318 (2003) (“*Millimeter Wave R&O*”); 47 C.F.R. §§101.1501-27.

⁴ *Millimeter Wave R&O* at ¶ 50.

⁵ *Service Rules for the 71-76 GHz, 81-86 GHz, and 92-95 GHz Bands*, Memorandum Opinion and Order, 20 FCC Rcd 4889 at ¶ 3 (2005) (“*Millimeter Wave MO&O*”). The Commission found the pencil beam characteristics of the band diminish the risk of interference to the extent that first-in-time protection would be sufficient.

⁶ 47 C.F.R. §101.63(b).

⁷ *Millimeter Wave R&O* at ¶ 2; 47 C.F.R. §101.1523(b)(3).

registered approximately 18,500 fixed links.⁸ Two years later, there were 446 active licenses and about 22,600 registered links.⁹

II. THE FCC SHOULD AMEND ITS 70/80 GHz RULES

Today some 70/80 GHz links span 10 miles or more as parts of larger and more sophisticated networks than the Commission likely envisioned for the band thirteen years ago. Some serve functions not anticipated at that time.

We ask the Commission to consider rule changes to improve incumbent fixed operations.

The Commission Should Modify the Regulatory Regime for the 70/80 GHz Band

Given the explosive growth and evolving nature of the applications in the band, the Commission should consider whether “light licensing” needs adjustment.

Part 101 subpart Q, which applies specifically to the 70/80 GHz band, sets forth the light-licensing regime. It allows links to be registered quickly and inexpensively, requires minimal coordination with incumbent registrants, and offers an incumbent modest interference protection if its link was registered first.¹⁰ There is no formal channel plan, so that licensees may register for any part of the band, or all of it, at a given location.¹¹ The Part 101 spectral efficiency rules do not apply here.¹² On the other hand, rules governing the accuracy of information regarding transmitter location and elevation are the same as in the fully-licensed bands; *i.e.*, antenna sites must be accurate within one second in the horizontal dimensions and one meter vertically.¹³

⁸ *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services, et al.*, GN Docket No. 14-177, et al., Notice of Inquiry, 29 FCC Rcd 13020 at ¶ 76 (2014) (“24+ GHz NOI”).

⁹ *24+ GHz Further Notice* at ¶ 425.

¹⁰ 47 C.F.R. §101.1523.

¹¹ 47 C.F.R. §101.1505(a).

¹² 47 C.F.R. § 101.141(a).

¹³ 47 C.F.R. §101.21(e) (note).

As was the Commission's intent, the 70/80 GHz rules make it faster and easier for a user to register and begin operating a link than in the fully-licensed microwave bands, without a formal prior coordination notice process to inform incumbents of a proposed new installation. The interference protection for existing registrants is correspondingly relaxed. Indeed, the registration process permits the installation of a link that is known to threaten interference to another user.

We suggest the Commission amend its rules in two respects.

1. Construction Requirements. The Commission should require 70/80 GHz registrants to file a certification of construction with a third-party database manager when a link has been placed into operation, showing the frequencies actually in use. As with other Part 101 fixed microwave links, a registration that has no construction certification when the construction period has lapsed would automatically terminate.

Because no certification of construction is presently required, the database could contain registrations that are not operational and never will be. In the *Millimeter Wave R&O*, the Commission reserved discretion to revisit this issue if experience indicated additional measures were necessary.¹⁴ We believe they are.

Requiring a construction certification will permit subsequent licensees to determine more accurately what spectrum is available in a given market. It also would inform the Commission as to what spectrum is being used.

First-in-time priority of 70/80 GHz registrations incentivizes licensees to submit registrations as early as possible, often while they are still negotiating tower leases and finalizing system plans. For a registration to be compliant with the Commission's rules, however, it must

¹⁴ *Millimeter Wave R&O* at ¶ 80.

be accurate to within one second (longitude/latitude) and one meter (vertically) of where the equipment is deployed.¹⁵ The interplay of these rules is predictable: licensees may submit multiple registrations at various locations and heights for a single transmit site because they require priority protection but may not yet know precisely where their equipment will be deployed. The requirement for a construction certificate will clear unneeded registrations from the database.

2. Permitting Registrations to be Amended. The existing rules do not allow pending registrations to be amended—for example, to upgrade equipment with more spectrally-efficient technologies. The first-in-time priority principle encourages a registrant to continue using less efficient technologies, rather than forfeit its protection by filing a later registration that shows new equipment. The Commission can address this issue by permitting modifications of a registration, including equipment upgrades. Roughly speaking, we propose that the Commission allow changes that do not increase the potential for interference to other users, present or future.¹⁶

¹⁵ 47 C.F.R. §101.21(e) (note).

¹⁶ We offer to work with the Commission on the specifics of what changes would be allowed. We expect to see limits on changes in location, elevation, azimuth, frequency, and antenna gain, and on increases in power and bandwidth. The changes that qualify as minor modifications under Section 1.929 could be a starting point, but may need adjustment for use here.

III. CONCLUSION

Taken together, these rule changes will make operations in the 70/80 GHz band more efficient and will accommodate more users. We urge the Commission to promptly issue a Notice of Proposed Rulemaking. Suggested language is in the Appendix.

Respectfully submitted,



Cheng-yi Liu
Mitchell Lazarus
FLETCHER, HEALD & HILDRETH, P.L.C.
1300 North 17th Street, 11th Floor
Arlington, VA 22209
703-812-0400
Counsel for the Fixed Wireless
Communications Coalition

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APPENDIX

Amend Section 101.1523(a) by adding paragraphs (1) and (2) as follows (new text is underlined):

(a) Registration of each link in the 71-76 GHz, 81-86 GHz, and 92-95 GHz bands will be in the Universal Licensing System until the Wireless Telecommunications Bureau announces by public notice the implementation of a third-party database.

(1) The licensee must file with a third-party database manager a certificate attesting that the link is constructed and in operation within 12 months of registration. The third-party database manager will automatically delete any registration that lacks a timely construction certificate.

(2) A licensee can modify a registration without losing the first-in-time interference protection described in paragraph (b)(3) below so long as the modification does not increase the potential for interference to other users, including potential users not yet registered. [details to follow]