

Before the
Federal Communications Commission
Washington DC 20554

In the Matter of)	
)	
Amendment of Part 101 of the)	
Commission’s Rules to Facilitate the Use of)	WT Docket No. 10-153
Microwave for Wireless Backhaul and Other)	
Uses and to Provide Additional Flexibility to)	
Broadcast Auxiliary Service and Operational)	
Fixed Microwave Licensees)	
)	
Request for Interpretation of Section)	
101.141(a)(3) of the Commission’s Rules)	WT Docket No. 09-106
Filed by Alcatel-Lucent, Inc., <i>et al.</i>)	
)	
Petition for Declaratory Ruling Filed by)	WT Docket No. 07-121
Wireless Strategies, Inc.)	
)	
Request for Temporary Waiver of Section)	
101.141(a)(3) of the Commission’s Rules)	
Filed by Fixed Wireless Communications)	
Coalition)	

**PETITION FOR RECONSIDERATION OF THE
FIXED WIRELESS COMMUNICATIONS COALITION**

Pursuant to Section 1.429 of the Commission’s Rules, the Fixed Wireless Communications Coalition (FWCC)¹ files this Petition for Reconsideration in the above-captioned proceeding.²

¹ The FWCC is a coalition of companies, associations, and individuals interested in the Fixed Service—i.e., in 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.

The FWCC is grateful to the Commission for having accommodated most of our concerns in the proceeding. This petition seeks mainly to tie up a few loose ends.

A. EFFICIENCY STANDARDS FOR THE 13 GHz BAND

Section 101.141(a)(3) does not specify a minimum throughput for the 13 GHz frequencies newly authorized for Fixed Service use.

1. *Minimum throughput for the 13 GHz band*

The FWCC recommends setting the same throughput requirements for 13 GHz as apply to the 11 GHz band. This can be accomplished, first, by amending the preamble to Section 101.141(a)(3) as follows:

The following capacity and loading requirements must be met for equipment applied for, authorized, and placed in service after June 1, 1997 in the 3700–4200 MHz (4 GHz), 5925–6425 and 6525–6875 MHz (6 GHz), 10,550–10,680 MHz (10 GHz), ~~and~~ 10,700–11,700 MHz (11 GHz), and 12,700 to 13,150 MHz (13 GHz) bands:

Second, the cell in the table in the first column, third-to-last line is amended as follows:

30.0 (11 <u>and 13</u> GHz)	
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2. *Accommodating 12.5 MHz Channels*

The above change will trigger the need for a further adjustment.

The provisions newly added to Section 101.147 by the *Report and Order* allow the use of 12.5 MHz channels in both the 7 and 13 GHz bands.³ But the table of capacity and loading requirements in Section 101.141(a)(3) does not list a 12.5 MHz channel. That omission invokes Section 101.141(a)(4):

² *Amendment of Part 101 of the Commission's Rules to Facilitate the Use of Microwave for Wireless Backhaul*, Report and Order, Further Notice of Proposed Rulemaking, and Memorandum Opinion and Order, 26 FCC Rcd 11614 (2011) (*Report and Order*).

³ 47 C.F.R. §§ 101.147(l)(3) (7 GHz), 101.147(p)(3) (13 GHz).

If a transmitter is authorized to operate in a bandwidth that is not listed in paragraph (a)(3) of this section, it must meet the minimum payload capacity and traffic loading requirements of the next largest channel bandwidth listed in the table. . . .⁴

The next largest channel bandwidth listed in the table, above 12.5 MHz, is 20 MHz, with a minimum required payload capacity of 89.4 Mb/s. For a 12.5 MHz channel, this works out to 7.2 bits/second/Hertz—not a practical payload for a reasonably long and reasonably reliable link.

The FWCC therefore requests that the Commission add another line to the table in Section 101.141(a)(3) as follows:

Nominal Channel bandwidth (MHz)	Minimum payload capacity (Mbits/sec) (per polarization)	Minimum traffic loading payload (as percent of payload capacity)
12.5	55.9	50

This will maintain the same bits/second/Hertz requirement as the Commission applies to 10 and 20 MHz channels.⁵

B. FIXED SERVICE USE OF VACANT 13 GHZ BAS/CARS CHANNELS

The *Report and Order* inserted a new note (34) in Section 101.147, applicable to both the 7 and 13 GHz bands, that reads as follows: “In the bands 6,875-7,125 MHz and 12,700-13,150 MHz, [Fixed Service] links shall not intersect with the service areas of television pickup stations.”

The note does not include a limitation to co-channel operations. An FWCC member confirmed with the Commission staff that the omission is intentional. The apparent purpose is to

⁴ 47 C.F.R. § 101.141(a)(4).

⁵ We omit the right-hand column of the table, which lists “typical utilizations” in terms of DS-1 and STS-1 channels. The omission follows on our recent request that the Commission drop these designations as increasingly irrelevant with the migration from dedicated circuits to Internet protocol and other modern interfaces. Comments of the Fixed Wireless Communications Coalition at 8 (filed Oct. 4, 2011).

exclude Fixed Service operations from all areas where Part 74 TV Pickup stations are authorized, even as to frequencies that are not licensed under Part 74.

The *Report and Order* estimates that the Fixed Service can serve approximately ten percent of the population in each of the 7 and 13 GHz bands, primarily in rural areas.⁶ Fixed Service use in these bands is severely restricted in most major metropolitan areas.

A check of the licensing database shows that many of the 13 GHz TV pickup licenses are authorized for a single frequency, or for otherwise less than the full band. Removing these license areas from the note (34) exclusion, and allowing Fixed Service operation in areas where at least one Fixed Service channel pair is available, would increase the potential Fixed Service population coverage to about 120 million.⁷

The only plausible reason for barring Fixed Service operation on vacant 13 GHz channels is to preserve growth opportunities for TV pickup. The Commission itself, however, makes a strong argument against this position:

- Fifty megahertz of spectrum in each of the 7 and 13 GHz bands will remain exclusively for BAS and CARS use.⁸
- BAS and CARS path and channel licensing in the 13 GHz band have dropped sharply in the last decade.⁹
- Only one new BAS TV pickup license in these bands has been granted in the past two years.¹⁰

⁶ *Report and Order* at ¶ 22. At 13 GHz, under the present rule, Comsearch estimates the Fixed Service can serve 42 million out of 309 million total (2010 census data). This compares with the Commission's estimate of 35 million available out of 281 million (2000 census data). *Wireless Backhaul: Further Inquiry into Fixed Service Sharing of the 6875-7125 MHz and 12700-13200 MHz Bands*, Public Notice, *Public Notice*, 26 FCC Rcd 7953 at Attachment B (WTB 2011).

⁷ Source: Comsearch. The number 120 million can vary about 5 percent either way depending on the details of the calculation.

⁸ *Report and Order* at ¶ 32.

⁹ *Id.*

- The development of new technologies could provide broadcasters with new mechanisms to support ENG.¹¹

Taking all of these factors into account, the FWCC respectfully asks the Commission to reconsider the exclusion of the Fixed Service from vacant 13 GHz channels in BAS/CARS service areas, and instead to limit the exclusion to co-channel operations. This would roughly triple the population within reach of the Fixed Service at 13 GHz, with little or no impairment to BAS/CARS operations.¹²

C. MODIFICATION OF THE FINAL LINK RULE

The *Report and Order* eliminated the “final link rule,” which had prohibited broadcasters from using Part 101 stations as the final link in the chain of distribution of program material to broadcast stations.¹³ A key rationale for this change was the sharing of spectrum the other way, allowing the Fixed Service access to BAS and CARS frequencies.¹⁴

Given the very limited Fixed Service access to the BAS and CARS bands—especially if the Commission chooses not to grant the request in Part B above—we ask that the final link rule be eliminated only in areas where the Fixed Service can use the 7 or 13 GHz bands.

¹⁰ *Id.*

¹¹ *Id.* The *Report and Order* mentions, for example, a technology that supports reliable broadcast-quality video newsgathering using Verizon Wireless’s 4G LTE network. *Id.* at n.119.

¹² We do not make a similar request at 7 GHz, due to the limited number of channels available.

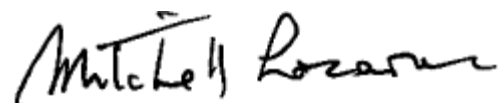
¹³ *Report and Order* at ¶ 36.

¹⁴ “[Fixed Service] licensees do not object to elimination of the [final link] rule so long as FS is granted access to BAS and CARS spectrum in the 7 and 13 GHz bands” *Report and Order* at ¶ 37. “Especially in view of the increased sharing of BAS bands with FS stations we propose above, we believe it is appropriate to provide broadcasters with additional flexibility to use the FS bands.” *Amendment of Part 101 of the Commission’s Rules to Facilitate the Use of Microwave for Wireless Backhaul*, Notice of Proposed Rulemaking and Notice of Inquiry, 25 FCC Rcd 11246 at ¶ 25 (2010).

CONCLUSION

The Commission's adopting the above proposals will help to maximize the use of increasingly scarce fixed backhaul spectrum.

Respectfully submitted,

A handwritten signature in black ink that reads "Mitchell Lazarus". The signature is written in a cursive style with a prominent "M" and "L".

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