

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
CITY OF KETCHIKAN DBA KETCHIKAN PUBLIC UTILITIES)	File No. 0005820273
)	
Application for a New Station in the Common Carrier Fixed Point-to-Point Microwave Service)	
)	
Request for Waiver to Permit Fixed Operation in 6425-6525 MHz Band)	
)	

MEMORANDUM OPINION AND ORDER

Adopted: June 20, 2014

Released: June 23, 2014

By the Deputy Chief, Broadband Division, Wireless Telecommunications Bureau:

I. INTRODUCTION

1. In this *Memorandum Opinion and Order*, we grant a request for waiver filed by City of Ketchikan dba Ketchikan Public Utilities (“Ketchikan”) to allow licensing of a Common Carrier Fixed Point to Point Microwave Station in the 6425-6525 MHz band, which is authorized for use solely by mobile-only Local Television Transmission Service (“LTTS”), Private Operational Fixed Service (“POFS”), Broadcast Auxiliary Service (“BAS”) and Cable TV Relay Service (“CARS”) stations. A waiver is consistent with the underlying purposes of the rule because there are no LTTS, POFS, BAS or CARS operations centered around permanent locations in Alaska where Ketchikan proposes operation and because Ketchikan cannot meet its communications needs solely by using available frequencies in the Common Carrier Fixed Point to Point Microwave Service.

II. BACKGROUND

2. The 6425-6525 MHz band is currently available for assignment to mobile LTTS, POFS, BAS, and CARS stations.¹ The adjacent bands, 5925-6425 MHz and 6525-6875 MHz, are available for assignment to stations in the Common Carrier Fixed Point-to-Point Microwave Service and the Private Operational Fixed Point-to-Point Microwave Service.² When the Commission allowed broadcasters, networks and cable operators to access to the 6425-6525 MHz band on a co-primary basis in 1987, it observed that its action would “provide added flexibility in establishing microwave links for mobile television pick-up. This flexibility is needed in some urban areas where the 1.9 and 6.8 GHz bands are heavily utilized and demands are increasing.”³ According to Commission licensing records, the 6425-6525

¹ See 47 C.F.R. §§ 74.602(i), 78.18(a)(5), 101.101, 101.147(j), 101.803.

² See 47 C.F.R. § 101.101.

³ See Establishment of a Spectrum Utilization Policy for the Fixed and Mobile Services Use of Certain Bands Between 947 MHz and 40 GHz, GEN. Docket No. 82-334, *Third Report and Order*, 2 FCC Rcd 1050, 1054 ¶ 29 (1987).

MHz band is not assigned to any facilities that operate around permanent locations in the pan handle of Alaska.⁴

3. Ketchikan is a municipal utility that has been serving the community of Ketchikan for the past 80 years.⁵ In addition to utility services, Ketchikan provides voice, cable television, Internet and other telecommunications services to Ketchikan area residents and businesses.⁶ The city of Ketchikan is located in far southeastern Alaska, on Revillagigedo Island, 90 miles north of Prince Rupert, British Columbia, and 235 miles south of Juneau, Alaska.⁷ Ketchikan intends to construct a fourth generation Long Term Evolution (“4G LTE”) cellular mobile data network to serve the Ketchikan area.⁸ Ketchikan has also secured funding and has commenced engineering planning to construct a microwave radio system between Ketchikan and Prince Rupert, British Columbia.⁹ The purpose of the microwave system is to transport Ketchikan’s broadband Internet and 4G LTE traffic to Prince Rupert, at which point Ketchikan would lease transport from Canadian telecommunication companies to transport the traffic from Prince Rupert to the Internet backbone or other points of termination.¹⁰

4. On June 14, 2013, Ketchikan filed an application for a new station in the Common Carrier Fixed Point-to-Point Microwave Service.¹¹ Ketchikan sought authority to construct and operate microwave facilities on multiple paths.¹² One of the paths is between High Mountain in Alaska and Mt. Hays in British Columbia, a distance of 78.3 kilometers.¹³ On that path, Ketchikan seeks authority to operate on seven 30 megahertz channels centered on the following frequencies: 6004.5 MHz, 6123.1 MHz, 6152.75 MHz, 6475 MHz, 6505 MHz, 6535 MHz, and 6565 MHz.¹⁴

5. On November 26, 2013, Ketchikan supplemented its application to request waiver of various Commission rules in order to allow operation of the path between High Mountain and Mt. Hays.¹⁵ Specifically, Ketchikan sought waiver of section 101.147(j) of the Commission’s rules to authorize the operation of fixed links in the 6425-6525 MHz band.¹⁶ It also sought waiver of section 101.109(c) of the Commission’s rules to authorize the use of 30 megahertz channels in the 6425-6525 MHz band, as opposed to the maximum authorized bandwidth of 25 megahertz provided for in the rule.¹⁷

⁴ We note that there are 30 licenses that are authorized to use this band nationwide or within the continental US, however, there were no objections from those licensees during the prior coordination process, and given the remote location of the proposed facilities we consider it unlikely that any of these licensees will need to operate mobile stations within the vicinity of this proposed fixed link. In the unlikely event that they do in the future, they would be required to coordinate their operation under the provisions of Section 101.103 of the Commission’s rules.

⁵ See File No. 0005820273, Request for Waiver and Response to Notice of Return (filed Nov. 26, 2013) (“Waiver Request”) at 1.

⁶ *Id.*

⁷ See Wikipedia entry for Ketchikan, Alaska, available at http://en.wikipedia.org/wiki/Ketchikan,_Alaska.

⁸ *Id.* at 8.

⁹ *Id.* at 1.

¹⁰ *Id.*

¹¹ File No. 0005820273 (filed June 14, 2013).

¹² *Id.*

¹³ *Id.*, Path 4.

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ *Id.* at 1.

¹⁷ *Id.*

6. Ketchikan provides certifications from Micronet, its United States frequency coordinator, and from its Canadian frequency coordinator, Frequency Coordination System Association, certifying that no frequencies are available in the 5925-6425 MHz and 6525-6875 MHz bands other than the frequencies proposed in the application.¹⁸ Ketchikan's immediate internal traffic transport needs for the microwave radio link are approximately 1.0 Gbps, and it provides an exhibit demonstrating that it needs seven 30 megahertz channels to obtain that throughput.¹⁹ Ketchikan argues that higher frequency Part 101 bands are not feasible because it cannot meet its engineering reliability standards for a path 78.3 kilometers long using those bands.²⁰ Ketchikan argues that its proposed microwave facility is unlikely to interfere with other facilities in Alaska because (1) its transmit antenna is pointed away from most of the state, (2) High Mountain is the southernmost communication site in Alaska, (3) there are no towns along the proposed path between High Mountain and the Canadian border, and (4) it proposes to use a high performance antenna with front-to-back isolation of 71 dB.²¹ Ketchikan seeks to use 30 megahertz transmit channels centered at 6475 MHz and 6505 MHz in order to align its use with the Canadian channel plan for those frequencies.²² It argues that a waiver would be in the public interest because it would help provide the public in Ketchikan with affordable broadband internet services.²³ Ketchikan contends that the extremely high cost of middle-mile (off-island) transport connections to the mainland Internet backbone is a major factor in the current price of internet services.²⁴ It argues that a waiver would allow it "to offer rural Alaskan residents affordable broadband Internet services at 'urban' rates of speed and quality."²⁵

7. Ketchikan's application, as amended to include the Waiver Request, was accepted for filing on December 4, 2013.²⁶ No oppositions or comments were filed.

III. DISCUSSION

8. Section 1.925(b)(3) of the Commission's Rules requires parties seeking a waiver to demonstrate that:

- (i) The underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and that a grant of the requested waiver would be in the public interest; or
- (ii) In view of unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome or contrary to the public interest, or the applicant has no reasonable alternative.

9. In this case, we conclude that Ketchikan has justified a waiver of the rules limiting use of the 6425-6525 MHz band to mobile operations under the second prong of the waiver standard. Ketchikan has demonstrated that it has no reasonable alternative to using frequencies in the 6425-6525 MHz band.

¹⁸ See Supplemental Showing Part 101.103(d). Micronet Communications, Inc., File No. L1228607 (filed as Exhibit 4 to the application); Letter from Alejandro Moreno, General Manager & Secretary-Treasurer, Frequency Coordination System Association to Mr. Dave Wand, PE, Engineering Manager, Gillespie Prudhon & Associates (Oct. 29, 2013) (filed as Exhibit 2 to the application).

¹⁹ See System Capacity and Throughput, Exhibit 3 to the application.

²⁰ Waiver Request at 2.

²¹ *Id.* at 2-4.

²² *Id.* at 4-6.

²³ *Id.* at 7-8.

²⁴ *Id.* at 8.

²⁵ *Id.*

²⁶ See Wireless Telecommunications Bureau Site-by-Site Accepted for Filing, Report No. 9175, *Public Notice* (rel. Dec. 4, 2013) at 2.

It cannot meet its needs solely by using the 5925-6425 MHz and 6525-6875 MHz bands because use of frequencies in those bands would conflict with existing operations; and it cannot meet its needs using higher frequency bands because its reliability objectives would not be met. Furthermore, under the unusual circumstances of this case, allowing Ketchikan to operate fixed microwave facilities in the 6425-6525 MHz band would not be inconsistent with the Commission's decision to reserve the frequencies for mobile use. The Commission anticipated that the primary need for this mobile use band would be in urban areas.²⁷ The band is not assigned to any facilities that operate around permanent locations in this rural part of Alaska. To the extent there may be future demand for mobile use of the band in Alaska, Ketchikan's microwave link is highly unlikely to preclude such future use because of the link's location, orientation, and use of a highly directional antenna. We emphasize that the 6425-6525 MHz band is designed primarily for mobile use, and grant of this waiver should not be considered an indication of our intent to revisit that designation. The grant of Ketchikan's Waiver Request is based on and is limited to the specific facts it has presented to us.

10. We also conclude that Ketchikan has justified a waiver of section 101.109(c) of the Commission's rules to allow the use of 30 megahertz channels in the 6425-6525 MHz band. In this case, allowing Ketchikan to use 30 megahertz channels will make its use of the band consistent with the band plan used in Canada. Since the link will terminate in Canada, allowing the use of 30 megahertz channels in this case will facilitate the efficient use of spectrum. Furthermore, since there are no existing uses of the band in the vicinity of Ketchikan's operation, we do not have to be concerned about overlapping facilities operating on different band plans.

11. We also find that grant of Ketchikan's requested waivers would be in the public interest. The Commission has recognized that microwave services can play an important role in providing backhaul "middle mile" services.²⁸ By granting these waivers, we allow Ketchikan to use microwave facilities as a backhaul solution. Such use can help facilitate the provision of advanced broadband and wireless services to the residents of Ketchikan.

IV. CONCLUSION AND ORDERING CLAUSES

12. Ketchikan has justified waivers of the Commission's rules to allow it to operate a fixed microwave link with 30 megahertz bandwidth channels in the 6425-6525 MHz band. We therefore grant its Waiver Request and direct processing of its application.

13. ACCORDINGLY, IT IS ORDERED that pursuant to Sections 4(i) and 309 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 309, and Section 1.925 of the Commission's Rules, 47 C.F.R. § 1.925, that the waiver request filed by City of Ketchikan dba Ketchikan Public Utilities on November 26, 2013 IS GRANTED.

²⁷ See Establishment of a Spectrum Utilization Policy for the Fixed and Mobile Services Use of Certain Bands Between 947 MHz and 40 GHz, *supra*.

²⁸ See Amendment of Part 101 of the Commission's 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, *et al.*, WT Docket No. 10-153, *et al.*, Report and Order, Further Notice of Proposed Rulemaking and Memorandum Opinion and Order, 26 FCC Rcd 11614, 11616 ¶ 2 (2011).

14. IT IS FURTHER ORDERED that the licensing staff of the Broadband Division SHALL PROCESS the pending application of City of Ketchikan dba Ketchikan Public Utilities on June 14, 2013, as amended on July 18, 2013, November 6, 2013, November 26, 2013, May 13, 2014, and June 13, 2014 (File No. 0005820273) in accordance with this *Memorandum Opinion and Order* and the applicable Commission rules.

15. This action is taken under delegated authority pursuant to Sections 0.131 and 0.331 of the Commission's Rules, 47 C.F.R. §§ 0.131, 0.331.

FEDERAL COMMUNICATIONS COMMISSION

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