

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

In the Matter of Applications of)
)
THE BOARD OF TRUSTEES OF NORTHERN) File Nos. 0005341316-0005341320
MICHIGAN UNIVERSITY)
)
For New Educational Broadband Service Stations)
)

MEMORANDUM OPINION AND ORDER

Adopted: November 7, 2013

Released: November 8, 2013

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

I. INTRODUCTION

1. In this *Memorandum Opinion and Order*, subject to certain conditions, we grant to the Board of Trustees of Northern Michigan University (NMU or Northern Michigan University) a waiver of the filing freeze on five new Educational Broadband Service (EBS) applications and associated waivers of Section 1.1913(b) of the Commission’s rules to permit manual filing of the applications.

II. BACKGROUND

2. *2500-2690 MHz Band Generally.* In developing regulatory policies in the 2500-2690 MHz band over the last several decades, the Commission has been cognizant of this band’s potential to host a variety of services. In 1963, the Commission established the Instructional Television Fixed Service (ITFS) in the 2500-2690 MHz band,¹ envisioning that it would be used for transmission of instructional material to accredited public and private schools, colleges and universities for the formal education of students.² In 1983, in response to the demand for additional spectrum for delivery of video entertainment programming to subscribers, the Commission re-allotted eight ITFS channels (the E and F channel blocks) and associated response channels for use by the Multipoint Distribution Service (MDS).³ In

¹ See Educational Television, Docket No. 14744, *Report and Order*, 39 FCC 846 (1963), *recon. denied* 39 FCC 873 (1964) (*ETV Decision*).

² See Amendment of the Commission’s Rules With Regard to the Instructional Television Fixed Service, the Multipoint Distribution Service, and the Private Operational Fixed Microwave Service; and Applications for an Experimental Station and Establishment of Multi-Channel Systems, *Report and Order*, 48 Fed. Reg. 33873, 33875 ¶ 9 (1983) (*1983 R&O*) (*citing ETV Decision*, 39 FCC 846, 853 ¶ 25.).

³ See Amendment of Parts 2,21,74 and 94 of the Commission’s Rules and Regulations in regard to frequency allocation to the Instructional Television Fixed Service, the Multipoint Distribution Service, and the Private Operational Fixed Microwave Service, Gen Docket No. 80-112 and CC Docket No. 80-116, *Report and Order*, 94 FCC 2d 1203 (1983) (“*First Leasing Decision*”).

conjunction with this re-allotment, the FCC permitted ITFS licensees to lease “excess capacity” on their facilities to commercial entities.⁴

3. In April 2003, the Commission proposed new technical rules and a new band plan for ITFS and MDS spectrum (changing the service names to EBS and Broadband Radio Service (“BRS”), respectively).⁵ At the same time, it implemented a filing freeze with respect to all applications for new BRS and EBS licenses, as well as for major modifications of those licenses, in order to permit the orderly and effective resolution of issues in the BRS/EBS proceeding.⁶ In August 2003, the Commission modified the freeze by permitting the filing of applications for new BRS licenses and major modifications of those licenses.⁷ The Commission also permitted the filing of applications for major modifications of EBS licenses, but maintained the filing freeze with respect to applications for new EBS licenses.⁸ On June 10, 2004, the Commission adopted new rules that initiated a fundamental restructuring of the 2500-2690 MHz band in order to provide both existing EBS and BRS licensees and potential new entrants greater flexibility in order to encourage the highest and best use of spectrum domestically and internationally.⁹ In 2008, the Commission sought comment on how to license unassigned EBS spectrum.¹⁰

4. *Northern Michigan University Applications.* NMU is an accredited university located in Marquette, Michigan that serves approximately 9,500 students with over 1,100 faculty and staff.¹¹ The University’s educational mission includes a strong emphasis on technological-based learning, in particular because of its remote location.¹²

5. On December 4, 2007, NMU filed an application seeking a new EBS authorization for four channels.¹³ On August 6, 2008, the Wireless Telecommunications Bureau (“Bureau”) granted NMU

⁴ *Id.* at 1206-07 ¶ 4.

⁵ See Amendment of Parts 1, 21, 73, 74 and 101 of the Commission’s Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands. *Notice of Proposed Rulemaking and Memorandum Opinion and Order*, WT Docket No. 03-66, 18 FCC Rcd 6722, 6811 ¶ 226, 6825 ¶ 260 (2003) (“*NPRM and MO&O*”).

⁶ See *NPRM and MO&O*, 18 FCC Rcd at 6811 ¶ 226, 6825 ¶ 260.

⁷ See Amendment of Parts 1, 21, 73, 74 and 101 of the Commission’s Rules to Facilitate the Provision of fixed and Mobile Broadband Access, Educational and Other advanced Services in the 2150-2162 and 2500-2690 Bands. *Second Memorandum Opinion and Order*, WT Docket No. 03-66, 18 FCC Rcd 16848 ¶ 1 (2003) (“*Second MO&O*”).

⁸ *Id.*

⁹ See Amendment of Parts 1, 21, 73, 74 and 101 of the Commission’s Rules to Facilitate the Provision of fixed and Mobile Broadband Access, Educational and Other advanced Services in the 2150-2162 and 2500-2690 MHz Bands. *Report and Order and Further Notice of Proposed Rulemaking*, WT Docket No. 03-66, 19 FCC Rcd 14165 (2004) (“*BRS/EBS R&O and FNPRM*”).

¹⁰ See Amendment of Parts 1, 21, 73, 74 and 101 of the Commission’s Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands, *Third Order on Reconsideration and Sixth Memorandum Opinion and Order and Fourth Memorandum Opinion and Order and Second Further Notice of Proposed Rulemaking and Declaratory Ruling*, WT Docket No. 03-66, 23 FCC Rcd 5992, 6060-6068 ¶¶ 180-204 (2008) (“*Second FNPRM*”).

¹¹ Northern Michigan University, Request for Waiver (filed Aug. 3, 2012) at 2 (“2012 Waiver Request”).

¹² *Id.* at 2.

¹³ File No. 0003250992 (filed Dec. 7, 2007) (“2007 NMU Application”). Specifically, NMU sought a Geographic Service Area (GSA) with a 35 mile radius around coordinates 46-30-48.8 N, 087-23-58.5 (NAD83) on post-

waivers of the filing freeze on new EBS applications and of the electronic filing requirement.¹⁴ The Bureau found that unique circumstances were presented by NMU's situation; *i.e.*, there was no EBS license that covered Marquette, Michigan, and NMU proposed to use the spectrum solely to meet its educational needs and the needs of the surrounding community.¹⁵ The Bureau also concluded that a waiver grant would be consistent with Commission precedent.¹⁶

6. The Bureau placed three conditions on the grant of the freeze waiver, based on commitments made by NMU. First, the Bureau adopted as a license condition NMU's commitment not to lease its spectrum.¹⁷ Second, the Bureau held, consistent with NMU's request, that NMU's GSA shall not include any area within the GSA of any previously licensed co-channel EBS station.¹⁸ Third, although the discrete operations proposed in NMU's 2007 Application were not within the Canadian coordination zone, to the extent that NMU subsequently wished to expand operations into the portion of its GSA that is within the coordination zone, the Bureau required NMU to comply with the coordination requirements of the relevant agreement between the United States and Canada.¹⁹ The Bureau also waived the electronic filing requirement because the Universal Licensing System was not configured to accept applications for new EBS stations.²⁰

7. On June 12, 2009, NMU filed an application²¹ and a corresponding waiver request in for one additional Educational Broadband Service (EBS) channel (channel G4) in the area of Marquette, Michigan.²²

8. Over a year later, on October 22, 2010, NMU, after discovering that it needed additional spectrum for its WiMAX network, requested Special Temporary Authority ("STA") to operate on the D2

transition EBS channels A4 (2572.00-2578.00 MHz), B4 (2578-2584 MHz), C4 (2584-2590 MHz), and D4 (2590-2596 MHz)

¹⁴ See In the Matter of Application of The Board of Trustees of Northern Michigan University For a New Educational Broadband Service Station, *Memorandum Opinion and Order*, 23 FCC Rcd 11832 (WTB 2008) ("First NMU Waiver Order").

¹⁵ *Id.* at 11836 ¶¶ 10-11.

¹⁶ *Id.* at 11836 ¶ 12, *citing* Gateway Telecom LLC d/b/a StratusWave Communications; Applications For New Educational Broadband Service Stations on the A and B Group Channels in Centerville, Ohio; and the A and B Group Channels in Arden, West Virginia, *Memorandum Opinion and Order*, 22 FCC Rcd 15789 (2007) ("*StratusWave MO&O*").

¹⁷ First NMU Waiver Order, 23 FCC Rcd at 11837 ¶ 13.

¹⁸ *Id.* at 11837 ¶ 14.

¹⁹ *Id.*, *citing* Interim Arrangement Concerning the Use of the Frequency Bands 2150 – 2162 MHz and 2500 – 2690 MHz by MCS and MDS Stations Near the Canada/United States of America Border (Dec. 5, 1997). A similar condition was placed on the grant of NMU's original Application for Special Temporary Authority (STA), File No. 0003187729 (filed Oct. 2, 2007). See License for Station WQH337.

²⁰ First NMU Waiver Order, 23 FCC Rcd at 11837-11838 ¶ 15.

²¹ File No. 0003872694 (filed Jun. 12, 2009) ("2009 NMU Application"). The 2009 NMU Application was filed as a request for modification of EBS license WQJZ200. Because that license already holds four channels, the 2009 NMU Application was treated as an application for a new EBS authorization. See The Board of Trustees of Northern Michigan University, *Memorandum Opinion and Order*, DA 13-XXXX (WTB rel. Month XX, 2013) ("Second NMU Waiver Order").

²² 2009 NMU Application, Exhibit A - Request for Waiver (filed Jun. 12, 2009) ("2009 Waiver Request").

and D3 channels in the Marquette GSA.²³ NMU indicated that it needed the additional channels to support more concurrent users of its network and to support bandwidth intensive applications such as online video and audio. Although the Bureau granted NMU an STA to operate on the D2 and D3 channels on November 9, 2010, NMU discovered that it needed still additional channels to support its network and thus its educational mission. Since it launched its WiMAX network in August 2009, NMU states that it has distributed 9,500 WiMAX-enabled laptop computers to students as part of its tuition and fees and to faculty and staff; it has expanded the network to cover the City of Marquette, Michigan and to cover the neighboring towns of Negaunee, Gwinn, Marquette Township, K.I Sawyer, and Powell Township and to a portion of Chocolay Township; it has offered over 1800 hybrid and Web-based on line courses to over 6000 NMU students; and it has allowed its network to serve as a “testbed” for emerging 4G equipment – all of which required additional spectrum.²⁴ Thus, on August 1, 2011, NMU requested STAs to permit it to operate on channels A1-A3, B1-B3, C1-C3, D1, G1-G3, the remaining EBS channels in the Marquette GSA. NMU’s requests were granted on August 10, 2011.²⁵ NMU currently operates on Channels A1-A3, B1-B3, C1-C3, D1-D3, and G1-G3 under Special Temporary Authority.²⁶

9. Today, the Division, in the Second NMU Waiver Order, granted NMU’s request to convert its Special Temporary Authority to operate on channel G4 into permanent authority, with conditions. The Bureau concluded that in view of NMU’s unique circumstances, applying the filing freeze was inequitable and contrary to the public interest. In making this decision, the Bureau found that because of its remote location, NMU faced substantial challenges in providing educational content to its students, faculty, and members of the Marquette community. Because cable and telephone providers have not deployed service in the Marquette area and because there are no EBS licensees in the Marquette from which NMU could lease spectrum, the Bureau concluded that NMU had no alternative but to ask the Commission for an additional channel when it discovered that it needed an additional channel to efficiently deploy its WiMAX network in conformance with the design of WiMAX equipment and to increase the coverage of its network.²⁷ The Bureau imposed the same conditions on the grant of NMU’s Second Waiver Request as it imposed on its First Waiver Request in the First NMU Waiver Order.

10. On August 3, 2012, NMU filed the five instant applications and associated waiver requests for permanent authorization for fifteen EBS channels (A1-A3, B1-B3, C1-C3, D1-D3, and G1-G3), which, as explained above, it currently operates under STAs, in the Marquette GSA.²⁸ NMU states that it needs the additional channels because, as it tested and deployed its WiMAX network, it discovered that its network had several limitations that reduced its educational benefits but that could be resolved through the use of more spectrum.²⁹ Specifically, NMU discovered that its base station could support only a limited number of concurrent users, that geographic variances in the Marquette’s GSA’s

²³ File No. 00044131769.

²⁴ File Nos. 0004828946, Exhibit A at 1-2; 0004828947, Exhibit A at 1-2; 0004828948, Exhibit A at 1-2; 0004828949, Exhibit A at 1-2; and 0004828877, Exhibit A at 1-2.

²⁵ File Nos. 0004828946; 0004828947; 0004828948; 0004828949; and 0004828877 (granted Aug. 10, 2011). NMU applied for EBS spectrum over the course of four years because it took a conservative approach to determining how much spectrum it needed to operate its WiMAX network efficiently and effectively. *See* 2012 Waiver Request at 4.

²⁶ Call signs WQMY724, WQOC431, WQOC432, WQOC433, WQOC434, and WQOC435.

²⁷ NMU needed an additional 6 megahertz channel to conform its system to the design of WiMAX equipment, which used 10-megahertz channels rather than 6 megahertz channels and to increase the coverage from 240 degrees at each tower site to 360 degrees. *See* Second NMU Waiver Order at ¶ 8.

²⁸ 2012 Waiver Request at 1.

²⁹ *Id.* at 5.

topography caused isolated areas to experience weak or no signal conditions, that certain sites experienced co-channel interference, and that ensuring adequate backhaul for the current network was difficult without additional spectrum.³⁰ NMU also states that the additional spectrum would provide it with sufficient spectrum to take advantage of emerging full duplex WiMAX Version 2 or Long Term Evolution Technology, two technologies that enable real time, bi-directional data applications.³¹

III. DISCUSSION

11. As noted, NMU seeks both a waiver of the filing freeze on new EBS applications and a waiver of the electronic filing requirement for such applications to permit it to use available EBS channels to operate a WiMAX network for the provision of educational and instructional material.³² The Commission may grant a request for a waiver if it is shown 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.³³ As discussed below, we conclude that NMU has met the waiver standard with respect to both of its requests, and accordingly we grant its Waiver Requests, subject to the conditions outlined below.

12. We conclude that application of the filing freeze would be inequitable and contrary to the public interest under the unique circumstances presented by NMU. Specifically, we find that, absent access to additional channels of EBS spectrum, NMU would face substantial challenges in providing educational content to all of the members of its school community, as well as members of the Marquette community, a relatively remote rural location. As was determined in the First NMU Waiver Order, the areas surrounding Marquette have no broadband access in residences or schools because cable and telephone providers have not deployed service in those areas and because there is no EBS licensee that covers the Marquette area.³⁴ NMU has done much of the work necessary to develop its WiMAX network, but in order to fully deploy this network it needs additional channels. Without any other EBS licensees in the Marquette area, NMU cannot attempt to acquire or lease spectrum from another EBS licensee. It therefore has no alternative to asking the Commission for additional channels. Furthermore, given the urgent need for educational broadband on the NMU campus and surrounding areas, we do not believe that asking NMU to wait until the Commission develops a new mechanism for assigning unassigned EBS spectrum is appropriate. We therefore conclude that NMU has justified a waiver of the EBS filing freeze under the second prong of the waiver standard.

13. We will impose the same conditions on the grant of these authorizations that the Bureau imposed in the First NMU Waiver Order. In this regard, we adopt as a license condition NMU's commitment in the current Applications, the 2009 NMU Application, and the 2007 NMU Application not to lease its spectrum.³⁵ Section 27.1201(a) of the Commission's Rules states that a "license for an Educational Broadband Service stations will be issued only to an accredited institution...engaged in the

³⁰ *Id.*

³¹ *Id.* at 6.

³² *See id.* at 1-2.

³³ 47 C.F.R. § 1.925(b)(3).

³⁴ *See* First NMU Waiver Order, 23 FCC Rcd at 11836 ¶ 10.

³⁵ *See* 2012 Waiver Request at 7; 2009 Waiver Request at 5; 2007 NMU Application, Waiver Request at 6.

formal education of enrolled students.”³⁶ NMU is such an institution and has indicated that it will use the proposed EBS system solely to meet the educational needs of the University and its surrounding community.³⁷ The provision of educational broadband services via new EBS licenses would be consistent with the Commission’s view that, “the public interest favors preserving [EBS] spectrum for licensing to [educators] and that doing so will further the educational objectives that led to the establishment of [EBS].”³⁸ We find that NMU’s concrete plan to put the spectrum to use immediately solely for educational purposes and its commitment not to lease the spectrum constitute unique circumstances that will ensure “that the spectrum is used for educational purposes”³⁹ justifying a waiver of the filing freeze.

14. We place the further condition on NMU’s licenses that its GSA shall not include any area within the GSA of any previously licensed co-channel EBS station.⁴⁰ In addition, although the discrete operations proposed in NMU’s Applications⁴¹ are not within the Canadian coordination zone, to the extent that NMU subsequently wishes to expand operations into the portion of its GSA that is within the coordination zone, it must comply with the coordination requirements of the relevant agreement between the United States and Canada.⁴² Specifically, prior to operating within 120 kilometers of the Canadian border, NMU must either file an application for an individual transmitter authorization with the Commission, which will be coordinated with Canada,⁴³ or directly coordinate with affected licensees across the border, as permitted under the agreement with Canada.

15. With respect to the electronic filing requirement contained in Section 1.1913(b) of the Commission’s Rules,⁴⁴ we observe that the Commission’s electronic Universal Licensing System (ULS) is not currently configured to accept applications such as the ones submitted by NMU. We therefore conclude that, in light of these circumstances, application of the rule would be inequitable and contrary to the public interest because it would be unfair to reject NMU’s Applications for failure to file electronically when electronic filing capability is not available. We therefore grant NMU a waiver to permit manual filing of its Applications.

16. Based upon the evaluation of the record before us, we conclude that NMU has demonstrated that continued application of the filing freeze and electronic filing requirement would be inequitable, unduly burdensome and contrary to the public interest, given the unique circumstances of this case. We also find that waiving the filing freeze and the electronic filing requirement will facilitate the provision of educational material through a broadband network in Northern Michigan and will further the Commission’s goals of maximizing broadband adoption by promoting affordability and removing other

³⁶ 47 C.F.R. § 27.1201(a).

³⁷ 2012 Waiver Request at 8.

³⁸ See *StratusWave MO&O*, 22 FCC Rcd at 15796 ¶ 15.

³⁹ See First NMU Waiver Order, 23 FCC Rcd at 11837 ¶ 13.

⁴⁰ 2012 Waiver Request at 7; 2009 Waiver Request at 5; 2007 NMU Application, Waiver Request at 11. Our analysis indicates there is a very slight overlap between NMU’s proposed GSAs and the GSAs of EBS Stations WNC753, WNC755, WNC756, and WNC762, licensed to Regional Educational Media Center #1.

⁴¹ See 2012 Waiver Request at 7; 2009 Waiver Request at 5.

⁴² Interim Arrangement Concerning the Use of the Frequency Bands 2150 – 2162 MHz and 2500 – 2690 MHz by MCS and MDS Stations Near the Canada/United States of America Border (Dec. 5, 1997).

⁴³ See 47 C.F.R. § 27.1209(b)(1)(i).

⁴⁴ See 47 C.F.R. § 1.913(b).

barriers to adoption by all Americans, including those with low incomes and disabilities.⁴⁵ We note that the waivers granted in the instant *Memorandum Opinion and Order* are based on the unique circumstances of this case, and do not prejudice the Commission's consideration of the appropriate mechanism generally for licensing unassigned EBS spectrum.⁴⁶

IV. CONCLUSION AND ORDERING CLAUSES

17. For the reasons discussed above, we grant NMU's requests for waiver of (1) the filing freeze that was imposed by the Commission on new EBS applications in the Commission's April 2003, *NPRM and MO&O*, and, (2) the electronic filing requirement in Section 1.1913(b) of the Commission's Rules. We also direct the Broadband Division to process NMU's Application in accordance with the requirements set forth in this *Memorandum Opinion and Order* and the Commission's rules.

18. Accordingly, IT IS ORDERED, pursuant to Section 4(i) of the Communications Act of 1934, as amended 47 U.S.C. § 154(i), and Section 1.925(b)(3) of the Commission's Rules, 47 C.F.R. § 1.925(b)(3), that the waiver requests filed by Northern Michigan University on August 3, 2012 in connection with File Nos. 0005341316, 0005341317, 0005341318, 0005341319, and 0005341320 ARE GRANTED, subject to the conditions noted below.

19. IT IS FURTHER ORDERED, pursuant to Sections 4(i) and 309 of the Communications Act of 1934, as amended, 47 U.S.C. §§154(i), 309 that the licensing staff of the Broadband Division, Wireless Telecommunications Bureau SHALL PROCESS File Nos. 0005341316, 0005341317, 0005341318, 0005341319, and 0005341320 in accordance with this *Memorandum Opinion and Order* and the Commission's Rules.

20. IT IS FURTHER ORDERED, pursuant to Sections 4(i) and 309 of the Communications Act of 1934, as amended, 47 U.S.C. § 154(i), 309 that the following conditions SHALL BE IMPOSED on any authorizations issued to Northern Michigan University as a result of the applications it has filed:

The Geographic Service Area of this station shall not include any area within the GSA of any previously licensed co-channel EBS station.

Operation within 120 kilometers of the Canadian border is prohibited without prior compliance with the coordination requirements of the Interim Arrangement Concerning the Use of the Frequency Bands 2150 – 2162 MHz and 2500 – 2690 MHz by MCS and MDS Stations Near the Canada/United States of America Border or any subsequent agreement with Canada.

⁴⁵ FCC Strategic Plan 2012-2016 at 6. In turn, this goal is based upon the statutory requirement that the Commission "encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans." Telecommunications Act of 1996, P.L. 104-104, Section 706(a).

⁴⁶ See *Second FNPRM, supra*.

The Board of Trustees of Northern Michigan University shall not lease any spectrum associated with this license to another entity.

21. 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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