

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

In the Matter of)	
)	
Amendment of Part 101 of the)	WT Docket No. 07-54
Commission’s Rules to Modify Antenna)	RM-11043
Requirements for the 10.7-11.7 GHz Band)	

**COMMENTS OF THE
FIXED WIRELESS COMMUNICATIONS COALITION**

The Fixed Wireless Communications Coalition (“FWCC”), pursuant to the provisions of Section 1.415 of the rules and regulations of the Federal Communications Commission (“FCC” or “Commission”) and the invitation extended by the Commission in the above referenced proceeding, hereby submits its comments in response to the FCC’s proposal to permit the installation of smaller antennas by Fixed Service (“FS”) licensees in the 10.7-11.7 GHz band (the “11 GHz Band”).^{1/}

Background

The FWCC is a coalition of companies, associations, and individuals interested in the Fixed Service -- terrestrial fixed microwave communications. FWCC’s membership includes manufacturers of microwave equipment, licensees of terrestrial fixed microwave systems and their associations, and communications service providers and their associations. Its membership also includes: railroads, public utilities, petroleum and pipeline entities, public safety agencies, and/or their respective associations, telecommunications carriers, landline and wireless, local, and interexchange carriers, and telecommunications industry professionals. FWCC’s members

^{1/} Amendment of Part 101 of the Commission’s Rules to Modify Antenna Requirements for the 10.7-11.7 GHz Band, *Notice of Proposed Rule Making (“NPRM”)*, FCC 07-38, rel. March 27, 2007, 72 Fed. Reg. 20494 (2007).

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.

The *NPRM* was initiated, in part, based on a petition for rule making submitted by FiberTower Corporation (“FiberTower”) which, among other things, provides backhaul services using FS spectrum to mobile wireless providers.^{2/} As the Petition pointed out, the current rules had the effect of requiring the use of 1.22 meter or larger antennas in the 11 GHz Band. Modification of the rules governing the minimum antenna gain, maximum beamwidth and sidelobe suppression requirements will, according to FiberTower, permit the use of 0.61 meter antennas. FiberTower pointed out that the use of smaller antennas would provide several benefits: (1) cost -- small antennas cost less to manufacture and distribute; (2) size --- smaller antennas are lighter and less conspicuous than large antennas; and (3) spectrum -- use of smaller antennas would permit more intensive use of the currently under-employed 11 GHz band.

The FCC solicited comments on the Petition in July, 2004.^{3/} Several parties, including FWCC, submitted comments supporting the Petition. Based, in part, on the comments received in response to the Petition, the FCC issued the *NPRM*. Because, as noted above, FWCC’s members include manufacturers and licensees of FS systems, FWCC is keenly interested in the further use of the 11 GHz band. Accordingly, FWCC is pleased to have this opportunity to submit the following comments in support of the *NPRM*.

^{2/} Petition for Rule Making, RM-11043, submitted by FiberTower Corporation, July 14, 2004 (“Petition”).

^{3/} *Public Notice*, Report No. 2666, rel. July 23, 2004.

Comments

As the NPRM pointed out, in other proceedings, the FCC has updated its regulations governing equipment used in related segments of the microwave spectrum.^{4/} When the FCC last reviewed its technical regulations governing the 11 GHz Band, it concluded that commenting parties had not provided it with sufficient information to modify its rules governing the 11 GHz Band.^{5/} Therefore, as the FCC has pointed out, the current rules governing the 11 GHz Band simply reflect the “technical sophistication of the communications equipment and the needs of the various users of the band at the time the rules were adopted” -- ten years ago.^{6/} However, as the FCC has recognized, a review of the rules governing the 11 GHz Band is overdue, and in light of the Petition, the information submitted in connection therewith, and the FCC’s experience with the use of smaller antennas in other bands, the Commission now has the information necessary to adopt regulations that will permit the deployment of more advanced antennas in the 11 GHz Band.

As the FCC notes, FS licensees provide, among others, critical backhaul services to mobile wireless providers. Based on the proliferation of additional mobile or nomadic wireless services, such as those in the Advanced Wireless Services (“AWS”), the Broadband Radio Service (“BRS”) and the 700 MHz radio services, the need for additional backhaul capabilities will expand dramatically. Similarly, competitive local exchange carriers, who will no longer be

^{4/} See, e.g., Amendment of Part 101 of the Commission’s Rules to Streamline Processing of Microwave Applications in the Wireless Telecommunications Services, WT Docket 00-19, *Report and Order*, 17 FCC Rcd 15040 (2002).

^{5/} See NPRM at n. 10, citing Reorganization and Revision of Parts 1, 2, 21 and 94 of the Rules to Establish a New Part 101 Governing Terrestrial Microwave Fixed Radio Services, *Report and Order*, WT Docket No. 94-148, 11 FCC Rcd 13449 (1996).

^{6/} NPRM at ¶ 19.

able to economically employ unbundled network elements (“UNEs”) provided by incumbent local exchange carriers (“ILECs”), will increasingly turn to fixed wireless providers to transport traffic. In addition, wireless broadband will increasingly satisfy needs for Internet access to schools, businesses and multiple dwelling units, and interconnection of campus wide local area networks (“LANs”). Moreover, many federal government agencies are required to operate physically diverse networks, a requirement that is expected to be met by the use of FS spectrum.^{7/} This physical diversity standard is now incorporated in federal telecommunications contract vehicles,^{8/} and state and municipal network standards.^{9/} As these important demands for the use of FS spectrum continue to grow, the FCC must take affirmative steps to make FS spectrum more accessible.^{10/}

An adjustment to the rules governing the 11 GHz Band, so that they are consistent with current industry standards, will help ensure that the 11 GHz Band can be used more intensely in

^{7/} See Consolidated Appropriations Act, 2005, Pub. L. No. 108-447, § 414, 118 Stat. 2809, 3260 (2004). See also, The White House, *The National Strategy for the Physical Protection of Critical Infrastructures and Key Assets*, at 48-49 (Feb. 2003).

^{8/} See generally, U.S. General Services Administration, Federal Acquisition Service, *GSA Networx Program Update*, Jan. 3, 2007 (see specifically slides 11 and 18).
http://www.gsa.gov/gsa/cm_attachments/GSA_DOCUMENT/2007FASNetworxProgramUpdate_R2BVF-h_0Z5RDZ-i34K-pR.pdf

^{9/} See, e.g. Maryland Emergency Management Agency, *Preparing For an Emergency-Continuity of Operations (COOP) Planning for Public Institutions*, at 47 (July 2005).

^{10/} As the Commission notes, four entities (in addition to FiberTower) have requested waiver of the rules so that they may begin to satisfy these needs today using 11 GHz Band spectrum. See *NPRM at n. 75*. While comparatively new uses of microwave spectrum proliferate there is a decreasing amount of FS spectrum in the lower microwave bands to meet these needs - the FCC has made spectrum traditionally used in microwave systems available for other services. The Commission has adopted service rules for other microwave bands, but those bands have generally been higher in the spectrum and not ideally suited for medium to long distance communications paths. New rules making the 11 GHz Band more accessible will help meet the needs created by new applications for microwave system and those of incumbent licensees required to relocate from reallocated spectrum.

several ways. First, as the Petition pointed out, 0.61 meter antennas cost less to manufacture and distribute. The list price for a 0.61 antenna is one third that of a comparable 1.22 meter antenna. This lower cost alone will help meet the needs outlined above. Moreover, smaller antennas also offer indirect savings. Because smaller antennas weigh less, they require less structural support and are less expensive to install. Once installed, they are less subject to wind load and other destructive forces and are therefore less expensive to maintain.

Second, 0.61 meter antennas are one quarter the weight and one quarter the area of 1.22 meter antennas. The smaller size and lower weight of the antennas means they can be used in more places than 1.22 meter dishes and can serve the markets noted above more effectively. There are many locations where, because of aesthetic or structural concerns, larger or heavier antennas cannot be employed. FiberTower found over 100 locations where the use of a 0.61 meter antenna was possible but the use of a 1.22 meter antenna was not.^{11/} Those locations include residential areas, certain rooftops, electrical transmission towers, monopoles and other radio towers.

The impact of the use of smaller antennas in the 11 GHz Band will likely be minimal^{12/} FiberTower has proposed rules that would protect other licensees and applicants from any additional interference that may be caused by smaller 11 GHz antennas. These rules are analogous to regulations that are already in place and operate effectively regarding the need to use so-called Category A antennas when the use of Category B antennas cause interference. The

^{11/} See FiberTower, Inc., Petition for Waiver of Sections 101.103 and 101.115 of the Commission's Rules, *Order*, 21 FCC Rcd 6386 at ¶ 7 (2006).

^{12/} See White Paper Report on Proposed Changes to Small Antenna Standards in the 11 GHz Band, Prepared by D.L. Gross for Alcatel N.A., June 24, 2004 (the "Alcatel White Paper").

use of these proposed rules will ameliorate any potential negative effects from the use of smaller 11 GHz Band antennas.

Conclusion

The Fixed Wireless Communications Coalition hereby submits the foregoing comments and urges the FCC to promptly promulgate regulations contemplated by the Notice of Proposed Rule Making in this proceeding.

Respectfully submitted,

Fixed Wireless Communications Coalition

By: /s/ Andrew Kreig

Andrew Kreig
Co-Chair
1333 H Street, N.W.
Suite 700W
Washington, D.C. 20005
202-452-7823

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