



May 24, 2011

Ms. Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12th Street, SW  
Room TWA325  
Washington, DC 20554

**Re: *Ex Parte Communication***  
***ET Docket No. 10-123, Spectrum Task Force Requests Information on***  
***Frequency Bands Identified by NTIA as Potential Broadband Spectrum;***  
***ET Docket No. 04-186, Unlicensed Operation in the TV Broadcast***  
***Bands; ET Docket No. 02-380, Additional Spectrum for Unlicensed***  
***Devices Below 900 MHz and in the 3 GHz Band***

Dear Ms. Dortch:

FiberTower Corporation (“FiberTower”), the Rural Telecommunications Group, Inc. (“RTG”), and the Wireless Communications Association International (“WCAI”), pursuant to Section 1.1206(b)(1) of the Commission’s rules, are electronically filing this written *ex parte* communication in the above-referenced dockets.

FiberTower, RTG, and WCAI congratulate the Commission for working with NTIA to repurpose federal spectrum for wireless broadband use. As demonstrated by rapidly increasing international and national shipments of mobile and fixed broadband devices, including machine-to-machine (“M2M”) products, the urgent and growing need for wireless backhaul in the United States simply cannot keep pace. It is vitally important for the Commission to continue to make additional spectrum available for this purpose.

Commercial and government broadband networks are only as good as the backhaul links that support them. Corresponding additional spectrum must be identified for fixed wireless backhaul and distribution links to support these mobile systems, including in spectrum below and above 4 GHz. Specifically, the NTIA evaluation needs to consider fixed wireless as well as mobile use of spectrum below 4400 MHz because fixed wireless backhaul facilities in the lower

bands are particularly cost-effective and beneficial for mobile systems, especially in rural and remote areas, due to the superior propagation and economic performance they provide.

The relatively low frequencies and narrow bandwidths suitable for mobile handset service also work extremely well for wireless backhaul. The fixed wireless systems used for network distribution and backhaul above 4 GHz are often architected differently from the highly efficient fixed wireless systems that exist below 4 GHz. The fixed wireless systems below 4 GHz often boast extremely lightweight grid antenna systems, versus the extremely large, heavy, unwieldy and often prohibitively expensive or heavy 400-500 pound antennas at 4 GHz and 6 GHz, for example. The vacant TV Bands (“TV White Spaces”) are particularly well-suited for fixed wireless use in rural areas, given the exceptional propagation features and the low-cost equipment already available given the Broadcast Auxiliary Services operating in these bands.

Likewise, frequencies above 11 GHz often offer significant capacity and link-density performance. Shorter links with superior spectrum-reuse, particularly for close-in applications (which occur in both large and small towns), function at frequencies up to about 90 GHz. Smaller antennas at 11 GHz up to 90 GHz are highly efficient and provide excellent bandwidth up to 1 Gbps and above.<sup>1</sup> In some cases, devices which contain both the antenna and radio operations are less than 1 foot in diameter and are suitable not only for traditional tower and rooftop placement, but also for placement on poles.<sup>2</sup> This is extremely significant due to the major advances in bringing wireless attachments to poles, and the absolute need for picocell and femtocells to aid in broadband rollout.

Because wireless backhaul and distribution aggregate mobile traffic from many handsets, they typically require bandwidths of 50 Mbps and greater in each direction. Fixed wireless systems above and below 4 GHz can easily accommodate this, and we congratulate the Commission for considering wider fixed wireless licensed channels in the bands above 4 GHz in its pending wireless backhaul proceeding.<sup>3</sup>

Therefore, in addition to examining frequencies below 4400 MHz for much-needed wireless backhaul, FiberTower, RTG, and WCAI urge the Spectrum Task Force and NTIA to look at federal spectrum above 4400 MHz to support the wireless backhaul and network distribution needed for mobile broadband services.

---

<sup>1</sup> See, e.g., *FiberTower and Bridgewave Communications Develop Gigabit Wireless Solution For 24 GHz*, Press Release (Feb. 1, 2011), available at <http://www.fibertower.com/corp/downloads/11-02-01%20FTWR%20Bridgewave%20Joint%20Release%20Final.pdf>.

<sup>2</sup> See generally *Implementation of Section 224 of the Act; A National Broadband Plan for our Future*, WC Docket No. 07-245, GN Docket No. 09-51.

<sup>3</sup> See, e.g., *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*, Notice of Proposed Rulemaking and Notice of Inquiry, 25 FCC Rcd 11246 ¶¶ 18-19 (2010), wherein wider channels at 7 GHz and 13 GHz are being considered.

Please do not hesitate to contact us with any questions.

Respectfully submitted,

*/s/ Joseph M. Sandri, Jr.*

Joseph M. Sandri, Jr.  
*Senior Vice President,  
Government & Regulatory Affairs*  
FiberTower Corporation  
1667 K Street, NW Suite 250  
Washington, D.C. 20036  
(202) 223-1028

*/s/ Caressa D. Bennet*

Caressa D. Bennet  
*General Counsel*  
Rural Telecommunications Group, Inc.  
10 G Street, NE  
Suite 710  
Washington, D.C. 20002  
(202) 551-0010

*/s/ Fred B. Campbell, Jr.*

Fred B. Campbell, Jr.  
*President & CEO*  
Wireless Communications Association  
International  
1333 H Street, NW  
Suite 700 West  
Washington, D.C. 20005  
(202) 452-7823

cc: Chairman Julius Genachowski  
Comm'r Michael J. Copps  
Comm'r Robert McDowell  
Comm'r Mignon Clyburn  
Comm'r Meredith Attwell Baker  
Ruth Milkman  
James Schlichting  
John Leibovitz

Blaise Scinto  
John Schauble  
Peter Daronco  
Julius Knapp  
Ira Keltz  
Ronald Repasi  
Alan Stillwell  
Bruce Romano