

September 13, 2010

VIA ELECTRONIC DELIVERY

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

**Re: Notice of *Ex Parte* Presentation
ET Docket Nos. 04-186, 02-380**

Dear Ms. Dortch:

On September 10, 2010, Joseph M. Sandri, Jr., Senior Vice President of Government and Regulatory Affairs for FiberTower Corporation (“FiberTower”); Fred B. Campbell, Jr., President & CEO of the Wireless Communications Association International; David Fritz, representing the Rural Telecommunications Group, Inc. (“RTG”); and Michele C. Farquhar of Hogan Lovells US LLP, Counsel to Sprint Nextel Corporation and Special Counsel to FiberTower and RTG, met with Charles Mathias, Legal Advisor to Commissioner Meredith Attwell Baker, and Henry Gola, an intern in Commissioner Baker’s office.

During the meeting, the representatives discussed their proposal to permit limited fixed licensed use of a limited portion of the vacant TV Bands White Spaces (“White Spaces”) channels in rural and tribal areas to provide more cost-effective backhaul options, as described in the attached one-page background paper. The parties noted their flexibility regarding the fixed licensed use of particular channels within the TV Bands, particularly rural vacant UHF Channels 14-20, and the possibility of limiting fixed licensed use to a limited percentage of vacant available channels in rural and tribal areas. We also noted that the instant proposal can largely accommodate any subsequent “repacking” in the TV White Spaces because dozens of vacant channels exist in the rural and tribal areas at issue in our proposal, and we propose utilizing at most a limited amount of the vacant channels in those areas. The parties distributed the attached letter, which provides more detailed information regarding existing Broadcast Auxiliary Service (“BAS”) equipment available for UHF Channels 14-20 that can be readily used for wireless backhaul and reasons why the parties’ proposal is consistent with any future TV Bands channel modification or repacking efforts.

In particular, the parties stressed that adopting the proposal now is especially critical and time-sensitive for rural carriers because major build-out deadlines are rapidly approaching in the Broadband Radio Service/Educational Broadband Service (“BRS/EBS”), 700 MHz, and other bands, as shown in the attached summary. Carriers are deciding whether and where to build out in rural

areas across the country, and time is of the essence. By adopting the proposal now, the Commission can ensure that the TV White Spaces spectrum can be deployed for cost-effective backhaul to support and facilitate viable rural build-out in the BRS/EBS, 700 MHz, and other wireless services; these efficiencies will free up resources for increased rural broadband deployment, including in more remote areas in many cases. Indeed, the existing off-the-shelf BAS equipment is the only cost-effective wireless backhaul solution in many rural areas.

The parties also encouraged the Commission to begin authorizing fixed licensed use of a small portion of the White Spaces immediately in rural or tribal areas on a very limited, case-by-case defined or trial basis, including through waivers of the Commission's rules. For example, it could authorize the Wireless Telecommunications Bureau ("Bureau") to grant time-limited waivers for fixed licensed use of a small portion of the TV White Spaces (or a limited percentage of the available channels in a rural market or tribal area) subject to specific waiver criteria established by the Commission. Waiver applicants could be required to make certain showings before obtaining fixed-use licenses, such as providing the proposed license area, the number and channel placement of incumbents in the area, the number and placement of vacant channels in the area, and information related to the population and the need for low-cost backhaul in the area. Such time-limited waivers could also be limited to rural markets or tribal areas where there are no broadcast stations that would be subject to potential repacking. To ensure that new broadband services are deployed in rural and tribal areas as expeditiously as possible, the Commission should also direct the Bureau to act on such waiver applications within 60 days after an application is filed. Furthermore, the parties urged the Commission to commit to making available a number of TV White Spaces channels for fixed licensed wireless backhaul use immediately upon conclusion of any internal analysis regarding the potential impact of repacking the TV Bands.

Finally, the parties cited the many benefits of licensed use of the White Spaces, including the exceptional propagation features of the band and the availability of low cost, lightweight antennas, which are ideal for the provision of significantly lower-cost backhaul over much longer distances in rural and tribal areas.

Pursuant to Section 1.1206(b)(2) of the Commission's rules, I am filing this notice electronically in the above-referenced dockets. Please contact me directly with any questions.

Respectfully submitted,

/s/ Michele C. Farquhar

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PROPOSAL FOR LIMITED FIXED LICENSED POINT-TO-POINT USE OF THE TV WHITE SPACES FOR BACKHAUL TO RURAL AREAS

Summary: Approximately 15 to 45 or more TV white spaces channels lay fallow in rural areas. The FCC should authorize limited fixed licensed point-to-point use of the TV “White Spaces” on UHF TV Channels 21-35 and 39-51 or UHF TV Channels 14-20 for:

- (1) Up to six vacant TV White Spaces channels second or greater adjacent to a TV broadcast station in rural counties; and
- (2) Any vacant TV White Spaces channels third or greater adjacent to a TV broadcast station in all counties.

Limited use of vacant UHF TV Channels 14-20 (470-512 MHz) in rural areas: (1) will enable utilization of cost-effective off-the-shelf equipment already being deployed for the Broadcast Auxiliary Service, (2) will facilitate any potential repacking of the broadcast spectrum bands, and (3) will avoid causing interference to any public safety or land mobile incumbents in major cities or more urban areas.

Expedited Action Needed: To stimulate broadband access in rural areas, the FCC should adopt this narrow proposal on an expedited basis. This will further the National Broadband Plan goals by assisting carriers seeking to deploy far more cost-effective middle mile infrastructure in unserved and underserved areas.

Benefits: Authorizing up to six vacant TV channels would bring many public interest benefits:

- ***Increased Rural Broadband Deployment.*** Backhaul infrastructure must be built before consumers can benefit from innovative new unlicensed and licensed broadband networks and devices; this narrow proposal provides urgently needed, cost-effective “middle mile” backhaul.
- ***Dramatically Lower Backhaul Costs.*** The favorable propagation characteristics of the TV White Spaces, as well as the readily available small lightweight antennas for the band, would reduce the middle mile backhaul and transport costs by as much as 80-90% in rural areas.¹
- ***Readily Available Fixed Link Equipment and Licensing Scheme.*** More than 300 fixed links are already licensed and installed in the TV Bands under the existing Part 74 Broadcast Auxiliary Service (“BAS”) rules; the longstanding use of these frequencies for BAS point-to-point links (some of which are 50-80 miles long or more) ensures the immediate, off-the-shelf availability of point-to-point equipment for backhaul use in TV Channels 21-35 and 39-51. The FCC could amend Part 101 or Part 74 to license non-broadcast fixed link users in the band.
- ***Numerous Vacant TV Channels Available in Rural Areas.*** TV White Spaces channels are widely available in rural unserved and underserved areas, with approximately 15 to 45 or more channels lying fallow in these areas. This narrow proposal would only authorize fixed licensed use on up to six of these channels, permitting many other uses. By contrast, very few additional links are available even in rural areas in the heavily used 6 GHz band.
- ***Protection of Incumbents and New Unlicensed Users.*** The limited number of new licensed point-to-point systems could operate without causing harmful interference to the many incumbent users in the TV Bands, and licensed use allows far greater certainty and accountability to those incumbents. Numerous vacant channels exist in the band for unlicensed users, and unlicensed devices could still operate on channels designated for fixed licensed use, subject to the normal protections afforded to licensed users when operational.
- ***Broadcast Repacking Already Contemplated.*** This narrow proposal only provides for use on a limited number of vacant channels, no matter how they are organized, and would not preclude or require waiting for any broadcast repacking or channel modification proposals.

¹ For example, a 75-mile or longer wireless backhaul link could be constructed at a cost of \$100,000-200,000 using two small lightweight antennas; covering the same distance using 3.65 GHz, 6 GHz, or higher-frequency spectrum would require up to four relay towers and a total of ten six-foot diameter dish antennas, costing \$3 million or more.



September 8, 2010

VIA ELECTRONIC DELIVERY

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

**Re: Written *Ex Parte* Presentation
ET Docket Nos. 04-186, 02-380**

Dear Ms. Dortch:

FiberTower Corporation (“FiberTower”), Sprint Nextel Corporation (“Sprint Nextel”), the Rural Telecommunications Group, Inc. (“RTG”), and the Wireless Communications Association International (“WCAI”) (collectively, the “Coalition”) strongly encourage the Commission to take immediate action to authorize limited fixed licensed use of a limited portion of the vacant TV Bands White Spaces (“White Spaces”) channels in rural and tribal areas. Specifically, the Commission should allow limited licensing for fixed use on UHF TV Channels 21-35 and 39-51, as well as UHF TV Channels 14-20, for up to six vacant TV White Spaces channels second or greater adjacent to a TV broadcast station in rural counties. The Coalition has confirmed the availability of off-the-shelf, cost-effective equipment for all UHF TV Channels, including Channels 14-20 (470-512 MHz), and remains flexible regarding limiting fixed use to a limited percentage of any vacant available channels in rural areas.

The Coalition’s very narrow proposal, utilizing off-the-shelf equipment for the Broadcast Auxiliary Service (“BAS”), is the only practical, cost-effective long-distance wireless backhaul solution that has been identified for rural and tribal areas. Adopting the Coalition’s proposal will help address the “notable lack of competition for special access in rural areas” recognized by the U.S. Government Accountability Office in a July 2010 Report to Congress,¹ and the “prohibitively

¹ *Enhanced Data Collection Could Help FCC Better Monitor Competition in the Wireless Industry*, Government Accountability Office Report to Congressional Requesters, 32 (July 2010).

expensive” backhaul transport costs highlighted by the Commission in the 2009 Rural Broadband Report.²

Moreover, the Commission recognized in the National Broadband Plan (“Plan”) that wireless backhaul is “critical to the deployment of wireless broadband and other wireless services.”³ Backhaul infrastructure must be built before consumers can benefit from innovative new unlicensed and licensed broadband networks and devices that may be offered in the TV White Spaces. In addition, the White Spaces channels are widely available in rural and tribal areas, with approximately 15-to-45 or more vacant White Spaces channels – up to 270 MHz – laying fallow in a given rural area. Consistent with the recommendations in the Plan, therefore, the Commission should “enhance the flexibility and speed with which companies can obtain access to spectrum for use as wireless backhaul” and make the White Spaces spectrum available for wireless backhaul “where it otherwise may go unused.”⁴

UHF TV Channels 14-20 would be viable for limited fixed licensed use in rural areas. The Coalition’s proposal provides significant flexibility regarding the fixed licensed use of particular TV White Spaces channels, especially on vacant UHF TV Channels 14-20 (470-512 MHz) in rural and tribal areas. The Coalition has confirmed that limited use of these vacant channels will enable the utilization of off-the-shelf equipment that is available from multiple vendors. For example, Kathrein, Inc. offers a PR-TV series high-gain, low-weight paraflector antenna designed for use in the 470-862 MHz range, encompassing UHF TV Channels 14-20. Axcera also offers a low-power QAM transmitter for the 470-860 MHz range. Both products can accommodate 6 MHz channel bandwidths. As the Coalition has stated many times, because off-the-shelf equipment is already in use for hundreds of existing BAS fixed point-to-point links, dramatically lower cost backhaul solutions can be deployed immediately in rural and tribal areas, subject to site availability, local zoning and other typical developmental concerns. Indeed, a 75-mile or longer wireless backhaul link could be constructed at a cost of \$100,000-200,000 using two small lightweight antennas that operate on vacant UHF TV Channels 14-20, whereas covering the same distance using 3.65 GHz, 6 GHz, or higher-frequency spectrum would require up to four relay towers and a total of ten six-foot diameter dish antennas, costing \$3 million or more. In addition, the proposed limited new fixed licensed operations would protect public safety and land mobile incumbents in TV UHF Channels 14-20 against harmful interference by not operating in the presence of those incumbents.

The Coalition’s proposal is consistent with any future TV Bands repacking effort. Another key benefit of the Coalition’s narrow proposal is that it is largely “repacking-proof” and consistent with any TV Bands channel modification or repacking efforts because it can accommodate essentially any subsequent repacking of the broadcast TV spectrum. Although the TV Bands are congested in most urban and suburban markets (especially compared to the relatively clear bands that the Commission auctions for exclusive use), they are far less utilized in rural areas. As mentioned above, dozens of vacant channels currently exist in rural and tribal areas. For example, the rural Midas, Nevada area has approximately 47 vacant White Spaces channels, far more than

² *Bringing Broadband to Rural America: Report on a Rural Broadband Strategy*, Federal Communications Commission, at ¶ 114 (May 22, 2009).

³ See “Connecting America: The National Broadband Plan,” Federal Communications Commission, 93 (March 2010) (“Plan”).

⁴ *Id.*

necessary to address concerns over a future repacking in that area even with limited fixed licensed use of a small portion of the vacant channels.⁵ Likewise, there are far fewer broadcast stations, low power TV stations, and TV translators that will need to be “repacked” in rural areas. Therefore, authorizing limited new fixed licensed use of a portion of these vacant channels – no matter how they are organized – would not preclude or require waiting for any broadcast repacking or channel modification proposals. Moreover, providing for limited fixed licensed point-to-point use greatly improves spectrum efficiency by increasing the chance that there will be some utilization of the White Spaces in rural and tribal areas, especially given that off-the-shelf equipment is already available today and the need for cost-effective backhaul is particularly urgent to provide broadband service to these areas.

By adopting the Coalition’s proposal, the Commission has a unique and practical opportunity to advance its broadband and competition policy goals and encourage the deployment of wireless broadband services in “prime” spectrum, especially in rural and tribal areas.

Pursuant to Section 1.1206 of the Commission’s rules, this letter is being filed via ECFS with the Commission’s Secretary.

Sincerely,

/s/ Joseph M. Sandri, Jr.

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⁵ See, e.g., <http://spectrumbridge.com/products-services/tv-whitespaces/single-location-search.aspx#Search>.

Major Upcoming Build-out Deadlines and Licensee Commitments

| SERVICE OR LICENSEE | BUILD-OUT DEADLINE(S) | APPLICABLE GEOGRAPHIC AREA |
|--|---|--|
| <p style="text-align: center;">BRS/EBS</p> | <p>May 1, 2011</p> <p>This build-out deadline applies to all BRS/EBS licenses initially granted prior to November 6, 2009</p> | <p>The service is licensed as a combination of BTAs and 35-mile radius geographic service areas</p> |
| <p style="text-align: center;">LightSquared</p> | <p>December 31, 2012</p> <p>LightSquared has committed to providing 4G terrestrial network coverage to at least 100 million people by this date; it has also committed to providing coverage to at least 145 million people by December 31, 2013</p> | |
| <p style="text-align: center;">Upper 700 MHz C Block</p> | <p>June 13, 2013</p> <p>This interim build-out deadline applies to all licensees except those providing broadcast services</p> | <p>This block is licensed on a REAG basis but is subject to build-out requirements that must be met on an EA basis</p> |
| <p style="text-align: center;">Lower 700 MHz A and E Blocks</p> | <p>June 13, 2013</p> <p>This interim build-out deadline applies to all licensees except those providing broadcast services</p> | <p>These blocks are licensed on an EA basis</p> |
| <p style="text-align: center;">Lower 700 MHz B Block</p> | <p>June 13, 2013</p> <p>This interim build-out deadline applies to all licensees except those providing broadcast services</p> | <p>This block is licensed on a CMA basis</p> |
| <p style="text-align: center;">2.3 GHz WCS</p> | <p>March 4, 2014</p> <p>This interim build-out deadline applies to all 2.3 GHz WCS licenses initially granted prior to September 2, 2010</p> | <p>This band is licensed on an MEA and REAG basis</p> |