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February 12, 2010

Marlene H. Dortch, Esq.
Secretary
Federal Communications Commission
445 12th St., S.W.
Washington, DC 20554

Re: GN Docket No. 09-137, GN Docket No. 09-51 (NBP Public Notice # 2), GN Docket No. 09-47, PS Docket No. 06-229, WT Docket No. 06-150

Dear Ms. Dortch:

On February 8, 2010, Mark Pagon, Chief Executive Officer of Xanadoo Company ("Xanadoo"), Cheryl Crate, Senior Vice President of Xanadoo, Paul Kolodzy of Kolodzy Consulting, LLC, an advisor to Xanadoo and I, also an advisor to Xanadoo, met with Nick Sinai, Energy and Environment Director of the National Broadband Task Force and Bob Weller of the Office of Engineering and Technology. The purpose of the meeting was to explain Xanadoo's plans to facilitate Smart Grid and Advanced Metering Infrastructure ("AMI") deployments in the Upper 700 MHz A Block and to identify rule changes in Part 27 of the Commission's rules that would optimize flexible deployments of such technologies.

Mr. Pagon introduced Xanadoo as a wireless company that has pioneered the construction and operation of fourth generation ("4G") WiMAX wireless broadband networks in the United States. Since 2006, Xanadoo has constructed, and is now operating, WiMAX networks in Texas, Oklahoma, and Illinois. Xanadoo has a 2.5/2.6 GHz spectrum footprint covering 12 states in the Southwest and Midwest. Pegasus Guard Band, LLC is a subsidiary of Xanadoo that is a major licensee of 312 million MHz POPs in the Upper 700 MHz Band A Block. Xanadoo originally held 32 A Block licenses and two B Block licenses representing 336 million MHz POPs, but in 2007 as part of the Commission's efforts to facilitate deployment of broadband in the Public Safety allocation in the Upper 700 MHz Band, Xanadoo agreed to turn back to the Commission its two B Block licenses and to modify and repack its A Block licenses, resulting in a net reduction of spectrum holdings of 24 million MHz POPs.

Mr. Pagon explained that commercial development of the A Block over the past nine years has been challenging because of the guard band encumbrances originally placed on the A Block and subsequent changes to its position and the technical and service rules that govern it. While these changes, including the removal of operational restrictions

confining the A Block to guard band status, have been positive from Xanadoo's perspective, the A Block has remained something of a moving target, which uncertainty has affected its commercial development. Additionally, the small channel width of the A Block, 1MHz by 1 MHz, is smaller than any of the traditional 4G topologies that have been under development, at least until very recently. Nonetheless, Xanadoo has diligently pursued opportunities to develop the A Block.

Recently, Xanadoo has been exploring 4G deployments for channel widths narrow enough to make broadband operations feasible in a 1 MHz by 1 MHz allocation such as the A Block. Xanadoo has been exploring the use of FDD and TDD technologies developed by two startup companies, namely Arcadian Networks and Full Spectrum, both of which Xanadoo regards as promising for Smart Grid and AMI deployments.

Mr. Pagon explained that these developments make Smart Grid and AMI solutions feasible in the A Block, and highlighted several projects including ones in Minnesota, San Diego and Vermont that would make such use of the band or are already doing so. The Minnesota project is a statewide Smart Grid network that has been operational for three years.

Nevertheless, several discontinuities in the rules limit the flexibility of AMI deployments in the A Block. These discontinuities include inconsistencies in the technical rules for the upper segment of the A Block with the lower segment of the A Block and disharmonies between the A Block technical rules and the technical rules governing the A Block's immediate spectral neighbors, the C and D Blocks. For example, portable handheld device operation is provided for everywhere in the Upper 700 MHz Block except the lower segment of the A Block. Conversely, base station emissions are not permitted in the upper A Block segment, but are allowed everywhere else. Further, the C and D Blocks are allowed flexibility to operate at higher power levels in less densely populated rural areas, but the A Block is granted no such flexibility. Additionally, as a general rule, the C and D Blocks' upper segments are permitted emissions of 1000 watts ERP, while A Block upper segment fixed stations are limited to 30 watts ERP. Even the rules about how to measure the power of emissions differ, for no apparent or stated reason, between C and D Block on the one hand and the A Block on the other hand, with the C and D Blocks being afforded a wide array of choices concerning how to make such measurements, while the A Block is confined to one specified methodology. We used the attached handout, which is a verbatim extract of Xanadoo's January 27, 2010 ex parte and reply comment filing in the above captioned dockets, to enumerate the inconsistencies that Xanadoo wishes to have the Commission rectify.

Mr. Pagon also referred to the January 6, 2010 filing of the Coalition for 4G in America, which called for the combination of the A Block with the adjacent D Block and the prompt auctioning of the D Block. Mr. Pagon noted that while Xanadoo was not part of the Coalition, Xanadoo supports the proposal of the Coalition, which has a long history of consideration by the Commission, well preceding the Second Report and Order in 2007 in which the Commission adopted the service and technical rules for the Upper 700 MHz Band.

Very truly yours,

//signed//

Kathleen Wallman
Wallman Consulting, LLC
Advisor to Xanadoo Company

cc: Nick Sinai and Bob Weller via email

The Commission's intent to harmonize the rules in the reorganized upper 700 MHz Band is clear in the Commission's *Second Report and Order*. Unfortunately, section 27.50 of the Commission's rules does not fully reflect that outcome. As a result, significant discrepancies remain between the rules for the upper segment of the A Block (787-788 MHz) and the lower segment (757-758 MHz), and between the A Block and its spectral neighbors, the C Block and D Block:

First, the rules allow for fixed, mobile, and portable use in the upper segment of A Block, but only for fixed use in the lower segment of A Block. *See* 47 C.F.R. § 27.50(b)(10) (specifying ERP limits for “[p]ortable stations (hand-held devices)” transmitting in several specified bands but omitting mention of the lower A Block segment, 757-758 MHz); *id.* § 27.50(b)(9) (specifying ERP limits for “control stations and mobile stations” in several specified bands but omitting mention of the lower A Block segment, 757-758 MHz); *id.* § 27.50(b)(1) (specifying permitted emission levels for lower A Block segment, 757-758 MHz). Thus, mobile handset transmissions are not provided for in the lower segment. By contrast, both of the commercial bands that neighbor the A Block (C Block and D Block) are permitted full flexibility, allowing handset use in both the upper and lower segments. *Id.* § 27.50(b)(10).

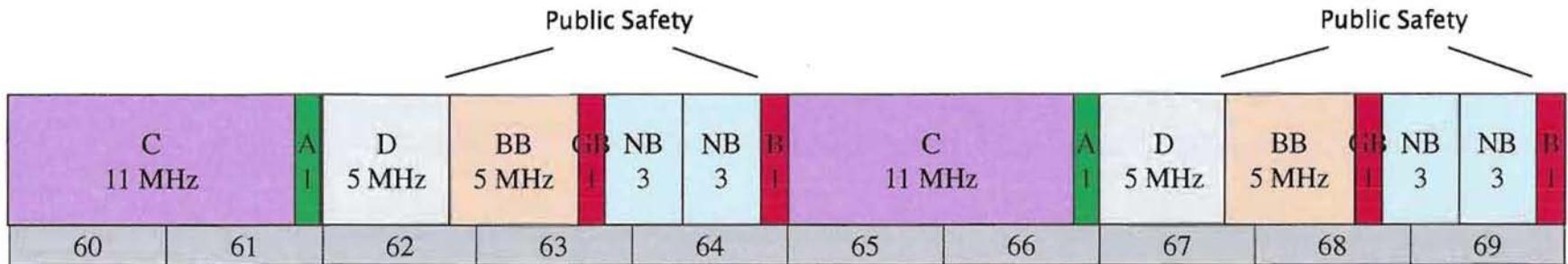
Second, the rules do not allow for base station emissions in the upper segment of the A Block. *See id.* § 27.50(b)(1) (specifying “fixed and base” ERP limits for lower A Block segment but omitting mention of upper A Block segment), *but see id.* § 27.50(b)(9) (specifying power limits for fixed stations in the upper segment of A Block). By contrast, both C and D Blocks are permitted full flexibility for fixed, mobile, base and portable operations in their upper segments. *See id.* § 27.50(b)(2).

Third, the rules provide no flexibility for A Block fixed and base stations in rural areas where population density is lower than elsewhere. By contrast, the rules allow rural power levels of 2000 watts ERP for emission bandwidths of 1 MHz or less in the C and D Blocks. *See id.* § 27.50(b)(3).

Fourth, the power levels allowed for upper segment A Block fixed stations is limited to 30 watts ERP. *See id.* § 27.50(b)(9). Upper segments of the C Block and D Block are permitted 1000 watts ERP as a general rule, and are allowed higher levels for rural areas. *See id.* § 27.50(b)(2)-(b)(5).

Fifth, the allowable power measurement techniques are different for the A Block versus the C Block and D Block as defined in § 27.50 (b)(11). *See id.* § 27.50(b)(11). The A Block must comply with 27.50 (b)(11) while C Block and D Block must comply with § 27.50 (b)(12) which indicates either using § 27.50 (b)(11) or any “Commission-approved average power technique”. *See id.* § 27.50(b)(12).

FCC Upper 700 MHz Allocation



- C-Block, 11 MHz Pair – Verizon Wireless
- D-Block, 5 MHz Pair – Public/Private Partnership

700 MHz Pegasus Guard Band