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Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 Twelfth Street, SW
Washington, DC 20554

Re: *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* – WT Docket No. 03-66 --
WRITTEN EX PARTE PRESENTATION

Dear Ms. Dortch:

I am writing on behalf of the Wireless Communications Association International, Inc. ("WCA") in response to the February 3, 2004 written ex parte presentation by Teton Wireless Television, Inc. ("Teton") in this docket. As will be demonstrated below, Teton's effort to discredit an engineering analysis submitted by WCA more than three months ago not only ignores well-established Commission procedures for predicting interference to Multipoint Distribution Service ("MDS") and Instructional Television Fixed Service ("ITFS") base station reception, but actually illustrates the wisdom of the process developed by WCA, the National ITFS Association ("NIA") and the Catholic Television Network ("CTN") for transitioning from the current 2500-2690 MHz bandplan to their proposed new bandplan.

It is beyond peradventure that one of the fundamental objectives of the *Notice of Proposed Rulemaking* ("*NPRM*") in this proceeding is to isolate the frequencies used for high-power, high-site downstream transmissions from those used for two-way cellular systems and thereby avoid the cochannel interference that those high-power, high site transmissions can cause at cellular base stations located in neighboring markets. For a variety of reasons that need not be repeated here, WCA, NIA and CTN proposed a market-by-market transition process under which a given market, along with neighboring markets, will only be transitioned to the new bandplan at such time as cellular services under the new bandplan is to commence.[1] Because high-power, high-site downstream transmissions generally blast far beyond the licensee's authorized service

[1] *See* Initial Coalition Proposal at App. B.

area boundary and can thus cause cochannel interference to neighboring systems, WCA, NIA and CTN proposed that the "Proponent" (the party funding and coordinating a given transition) have the ability to transition any licensee that has a geographic service area within 150 miles of the Proponent's geographic service area.[2] Save for Teton, no participant in this proceeding has taken issue with the concept that interference to cellular systems can be caused over such a distance.

In its initial comments in response to the *NPRM*, Teton attacked the WCA-NIA-CTN proposal, citing the Spectrum Policy Task Force's recommendation that the Commission authorize higher power operations in rural areas, *so long as such operations do not pose a threat of interference*.[3] As WCA, NIA and CTN emphasized in their reply, they have no quarrel with the concept of allowing rural operations at higher power so long as those operations do not pose a threat of interference.[4] However, turning from the conceptual to the practical, they did take issue with the assertion by Teton that its systems were sufficiently distant from others' service areas that it has "little or no possibility of interfering with other operators" and "should not be required to transition the use of their spectrum to new segmented band plans."[5] To supplement their prior illustrations of the potential for high-power, high-site transmissions to cause cochannel interference to cellular system in neighboring markets over substantial distances,[6] WCA, NIA and CTN submitted additional studies by the engineering firm of Kessler & Gehman Associates, Inc. ("Kessler & Gehman") of the potential for two existing high-power, high-site systems to cause interference. One of those systems was Teton's system in Twin Falls, which Kessler & Gehman predicted to cause interference to cellular operations in the Boise-Nampa, ID Basic Trading Area licensed to Sprint.

Teton's latest filing attempts to discredit Kessler & Gehman's analysis as "overstating" the extent of interference. While not noted in Teton's letter, it is clear from the engineering statement accompanying Teton's filing that the disparity in interference predications stems from the use of different propagation models. Kessler & Gehman utilized a model known as "free space + RMD," a model which accumulates free space loss where the 0.6 Fresnel zone is clear of all obstructions, an additional Fresnel zone loss (up to 6 dB) proportional to the percentage of the

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[2] *See id.* at 13.

[3] *See* Comments of Teton Wireless Television, WT Docket No. 03-66, at 9 (filed Sept. 8, 2003)["Teton Comments"], *citing Spectrum Policy Task Force Report*, ET Docket No. 02-135, at 59 (Nov. 2002)(emphasis added).

[4] *See* Reply Comments of WCA, NIA and CTN, WT Docket No. 03-66, at 49 (filed Oct. 23, 2003)["Coalition Reply Comments"].

[5] Teton Comments at 9.

[6] *See* WCA, NIA and CTN Reply Comments, at 31-33 (filed Nov. 29, 2002)["Coalition WTB PN Reply Comments"] (examining interference from Madison, WI to Milwaukee and Chicago and from Socorro, NM to Albuquerque).

0.6 Fresnel zone radius actually obstructed, and further additional loss determined by the "Epstein-Peterson" method for calculating loss where the line-of-sight between the transmitting antenna and the receiving antenna is obstructed. Teton did not utilize the free space + RMD model, but instead elected to invoke the Longley-Rice propagation model that is popular in broadcast circles.[7] In so doing, Teton ignored that the Commission has previously determined that the free space + RMD model employed by Kessler & Gehman is not only an appropriate model for predicting interference to MDS base stations, but has gone so far as to preclude the use of alternative propagation models (including Longley-Rice) in calculating potential interference to base station receivers for application purposes.[8]

In the end, however, it does not matter which propagation model one chooses to employ here. *What is important is that even using Teton's propagation model, interference from its Twin Falls system to cellular operations outside Teton's service area is predicted.* Although glossed over by Teton's cover letter, Teton's own engineering analysis concedes that interference is predicted at 8 of the 47 Sprint base stations under consideration and that this interference would adversely impact 2,257 square miles of Sprint's authorized service area.[9] While debates over how many cell sites will suffer interference, how much land area will be adversely effected, and how many people reside in that area can proceed *ad nauseum*, there is no disputing that continuation of Teton's high-power, high-site operation will hamper the ability of its neighbor to provide cellular service in the Lower Band Segment and Upper Band Segment that are proposed to be a safe haven for cellular service.

In short, the Teton filing merely illustrates the point that WCA has been making throughout this process – the continued operation of high-power, high-site downstream transmission facilities poses a threat of cochannel interference to cellular systems operating in neighboring markets. In an effort to be fair to incumbent service providers, WCA has proposed that multichannel video programming distributors serving as little as 5% of the population of their service area or utilizing digital compression technology on more than 7 channels be grandfathered. However, for the reasons WCA has discussed in detail before and which need not

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[7] *See* Warner, "Analyses of A Study of the Impact of the Twin Falls, ID MMDS/ITFS Video Operation on Sprint Cell Sites in the Boise-Nampa ID BTA #50," at 2 (dated Jan. 27, 2004)["Teton Analysis"].

[8] *See Amendment of Parts 1, 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions*, Report and Order on Reconsideration, 14 FCC Rcd 12764, 12788-89 (1999); *Amendment of Parts 1, 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions,* Report and Order on Further Reconsideration and Further Notice of Proposed Rulemaking, at Appendix D, ¶¶ 50-52.

[9] *See* Teton Analysis at 2. While Teton suggests that consideration of land use and clutter (which are barred from consideration by Paragraph 51 of the Appendix D Methodology) might further diminish predicted interference, the height at which most base station antennas are mounted tend to diminish the impact of these additional factors. *See id.* at 2.

be repeated here, extending that grandfathering further as Teton appears to advocate is unwarranted and contrary to the public interest.[10]

Respectfully submitted,

/s/ Paul J. Sinderbrand

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[10] *See, e.g.* Coalition Reply Comments at 44-51; Coalition WTB PN Reply Comments at 26-34.