

January 20, 2012

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

Re: WT Docket No. 10-153, Amendment of Part 101 to Facilitate Wireless Backhaul

Dear Ms. Dortch:

On behalf of the National Spectrum Management Association (NSMA),¹ pursuant to Section 1.1206(b)(1) of the Commission's Rules, I am electronically filing this written *ex parte* communication in the above referenced docket.

The 6 and 11 GHz bands are licensed by the Commission for "point-to-point" services and require the use of directional antennas to limit interference among licensees.² Focusing as much power as possible in the desired direction while emitting as little energy as possible in other directions is a fundamental obligation the rules impose on users as a condition of access to the shared bands. Specifically, the Commission's existing rules require transmitting and receiving antennas in these bands to meet, at minimum, a Category B antenna standard. This obligation effectively promotes spectrum efficiency and should be maintained.

In recent filings, Wireless Strategies, Inc. (WSI) proposed changes to Section 101.115(f) of the Commission's rules that, if adopted, would effectively eliminate this requirement. WSI's proposed changes also reduce licensees' obligations with respect to upgrading antennas below Category A.³ As discussed below, NSMA urges the Commission to reject WSI's proposed changes.

¹ NSMA is a voluntary association of individuals involved in the spectrum management profession including service providers, manufacturers, frequency coordinators, engineers, and consultants. NSMA's goal is to promote rational spectrum policy through consensus views formulated by representatives of diverse segments of the wireless industry.

² See 47 C.F.R. Section 101.115(a).

³ See Ex Parte Filing of Wireless Strategies Inc. to the Further Notice of Proposed Rule Making, WT Docket No. 10-153 (filed Nov. 9, 2011); Reply Comments of Wireless Strategies Inc. to the Further Notice of Proposed Rule Making, WT Docket No. 10-153 (filed Oct. 25, 2011); Reply Comments of Wireless Strategies Inc. Regarding the Notice of Inquiry Review of Part 101 Antenna Standards, WT Docket 10-153 (filed Oct. 4, 2011).

To support its claim that the use of sub-standard antennas will not cause harmful interference or block new application paths, WSI points to language that requires users of sub-standard antennas to fix predicted cases of interference, either by reducing EIRP or by upgrading to a “higher” performance (not necessarily Category A) antenna. While WSI may be theoretically correct, once the process has been adopted and is being used, achieving non-interference would require modification of systems that are installed and operating with sub-standard antennas in order to accommodate new systems. Negotiating such modifications, however, is far more difficult than it may appear. Faced with the prospect of reducing EIRP (and thus system availability) or of upgrading the antenna (which may not be feasible in many cases), users of sub-standard antennas could dispute the interference calculations of a conflicting request for frequency coordination, demand proof via potentially expensive and intrusive RF measurements, or otherwise delay implementation of any necessary changes. By the same token, new users would be discouraged from attempting a coordination that would require an upgrade of someone else’s sub-standard antenna because of the potential cost and time uncertainties associated with mitigating the interference conflict. In reality, under WSI’s proposal, a sub-standard antenna would have greater impact on the environment by virtue of being first-in-time than the rule language would imply. The FCC should continue to require fixed stations in the 6 and 11 GHz bands to use Category B or better antennas, as these standards set reasonable minimum requirements that limit the number of instances where it is necessary to negotiate antenna upgrades and preserve fair access to the spectrum for all users.

Furthermore, once predicted interference dictates that a sub-standard antenna must be upgraded, it should be changed to a minimum Category A model rather than just a “higher” performance type, as WSI proposes. The fact that interference is predicted is an indication that the area is congested and that a Category A antenna should be required. The purpose of requiring a Category A upgrade is not only to fix the specific interference case under consideration, but also to enable future additional use of the spectrum by limiting the overall emissions in unnecessary directions into the congested environment. The rules should continue to require a Category A upgrade, rather than WSI’s proposed “higher” performance antenna.

Finally, the Commission should use “authorized” EIRP as the reference point for any power reduction that is designed to remedy cases of predicted interference, as Comsearch has suggested,⁴ and should otherwise prohibit the operation of smaller antennas at an unnecessarily high EIRP. While WSI denies that users of small or sub-standard antennas would put themselves at an advantage by licensing at increased EIRP,⁵ NSMA is concerned that with the rule language proposed by WSI, usage of sub-standard antennas with unnecessarily boosted EIRP would become prevalent. Indeed, if a higher EIRP than necessary is authorized on the station license, the impact on system availability of having to later reduce EIRP to the level a Category A antenna would radiate in a particular direction would be diminished. In addition, an inflated EIRP could be used to offset the

⁴ See Comments of Comsearch, WT Docket No. 10-153, at 7 (filed Oct. 4, 2011).

⁵ See Reply Comments of Wireless Strategies Inc. to the Further Notice of Proposed Rule Making, WT Docket No. 10-153, at 4 (filed Oct. 25, 2011).

lower gain of sub-standard antennas. WSI's protests aside, users of sub-standard antennas would have every incentive to license the highest power they could coordinate. Higher EIRP with less directional antennas would amount to inefficient spectrum usage and would also discourage access by new entrants.

The Commission should reject WSI's proposed changes to Section 101.115(f) and otherwise block use of unnecessarily high EIRP with small antennas. Authorizing the "underclass" of paths that would result from the WSI proposals would significantly degrade the usefulness of these critical lower frequency bands to support high-reliability broadband services. Ample spectrum is available above 11 GHz where "small antennas" are already authorized and, because of the shorter wavelengths at these higher frequencies, provide much better directional characteristics than they would in the lower bands.

Respectfully submitted,

NATIONAL SPECTRUM MANAGEMENT ASSOCIATION

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