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April 3, 2012

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

Re: Amendment of parts 1, 2, 22, 24, 27, 90 and 95 of the Commission's Rules to Improve Wireless Coverage Through the Use of Signal Boosters; WT Docket No. 10-4

Dear Ms. Dortch:

AT&T has carefully reviewed the record in the above-captioned docket, including recent filings by both CMRS providers and signal booster manufacturers. While AT&T still has significant concerns about interference arising from signal boosters, in the interest of developing a proposal that will allow well-designed, non-interfering consumer boosters to be deployed, we submit the attached proposal. The proposal synthesizes the best elements of proposals already in the record, providing attribution where appropriate.

This letter is being filed electronically pursuant to Section 1.1206 of the Commission's rules. Should you have any questions, please contact the undersigned.

Sincerely,

/s/Jeanine Poltronieri
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cc (via e-mail): John Leibovitz
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AT&T – Signal Boosters

Overview

- While AT&T still has significant concerns about signal booster interference, in the interest of developing a proposal that will allow well-designed, non-interfering consumer boosters to be deployed, we submit the following proposal that synthesizes the best elements of proposals already in the record. The primary areas of concern are:
 - Output power
 - Automatic level control
 - Oscillation control
 - Uplink shutdown
 - Intermodulation
 - E911 location accuracy
 - Enforcement

Output Power

- AT&T agrees with Sprint that signal booster output power should be limited to 23 dBm and EIRP to 25 dBm, including antenna gain. Sprint Ex Parte, WT Docket No. 10-4 (filed March 7, 2012) (“Sprint Ex Parte”), 2.

Automatic Level Control

- AT&T agrees with Sprint that signal booster should employ Automatic Level Control (“ALC”) limiting the signal booster to transmitting at no more than its maximum permitted power level regardless of the input power. Sprint Ex Parte, 3.

Oscillation Control

- Boosters must be able to detect and mitigate (*i.e.*, via ALC or shut down) any oscillations on uplink and downlink bands, including operations that exceed any specified limits (*e.g.*, power, emissions). Oscillation detection and mitigation must occur automatically within 0.3 seconds on the uplink and 1 second on downlink, and remain off for at least 1 minute before restarting. After 5 restarts, the booster must shut off and remain off until manually reset by the device operator. Verizon Wireless/Wilson Electronics Ex Parte, WT Docket No. 10-4 (filed July 25, 2011) (“VZW/Wilson Ex Parte”), 2.

Uplink Shutdown

- Consumer boosters that do not receive mobile device transmissions at their uplink input port after a maximum of 15 minutes must either: (a) turn off the booster's uplink transmitter, (b) limit its uplink noise power output level to -70 dBm/MHz, or (c) reduce its uplink noise power limit to: Uplink Noise Power \leq -113 dBm/MHz - RSSI. VZW/Wilson Ex Parte, 3.

Intermodulation

- For UMTS Terrestrial Radio Access (“UTRA”), CDMA and Evolved UMTS Terrestrial Radio Access (“E-UTRA”) operation, the output power of the booster, when operating at its maximum stated output power, within the passband of the booster shall not increase

by the following amounts when two interfering continuous wave (“CW”) signals at a level of - 40 dBm are presented at the input to the booster:

- 10 dB, when measured using a 1 MHz measurement bandwidth, for UTRA signals with the first interfering signal at 3.5 MHz offset from the center of the first UTRA channel in the passband and the second carrier adjusted in frequency such that the intermodulation product falls at the frequency of the first UTRA channel in the passband.
- 10 dB, when measured using a 1 MHz measurement bandwidth, for CDMA signals with the first interfering signal at 1.25 MHz offset from the center of the first CDMA channel in the passband and the second carrier adjusted in frequency such that the intermodulation product falls at the frequency of the first CDMA channel in the passband.
- 10 dB, when measured using a 1 MHz measurement bandwidth, for E-UTRA signals with the first interfering signal at 1.0 MHz offset from the edge of the first and last E-UTRA channel in the passband and the second carrier adjusted in frequency such that the intermodulation product falls at the frequency of the first and last E-UTRA channel in the passband.
- For GSM operation with the booster set to maximum gain, the average power level of any intermodulation product of two CW tones spaced by 600 kHz and with levels as needed to achieve the maximum rated output power of the booster and centered in the passband of the booster, at the output of the booster shall be limited as follows:
-36 dBm in the frequency band 9 kHz to 1 GHz and -30 dBm in the frequency band 1 GHz to 12.75 GHz when measured with a 3 kHz measurement bandwidth. T-Mobile/Nextivity Ex Parte, WT Docket No. 10-4 (filed February 17, 2012) (“T-Mobile/Nextivity Ex Parte”), 14.

E911 Location Accuracy

- Product labeling requirements include notification to consumers that E911 location information may not be provided to calls served by the booster. Consumer boosters designed to pass through satellite GPS signals with no interference to CMRS or GPS operations for direct connected or device coupled boosters are excluded from this consumer notification requirement. (Verizon/Wilson proposal page 7)
- Licensees will not be held liable for E911 location accuracy when those capabilities are affected by signal booster use. T-Mobile/Nextivity Ex Parte, 9.

Enforcement

- The Commission should adopt a comprehensive enforcement plan in combination with any rules it adopts or industry standards it endorses.
- Consistent with Section 302(b) of the Act, the Commission should require that once new rules or standards become effective, the sale and marketing of devices that do not comply with such rules or standards will be deemed illegal. This is consistent with the approach the Commission took in the wireless microphones proceeding. *Revisions to Rules Authorizing the Operation of Low Power Auxiliary Stations in the 698-806 MHz Band*, FCC 10-16, ¶ 59 (2010). The Commission also should issue guidelines defining the penalties for marketing, sale and use of unauthorized signal boosters.

- The Commission should issue a Public Notice informing the public regarding the prohibition on the marketing, sale and use of unauthorized signal boosters. In addition, manufacturers should be required to engage in outreach and education of their customers regarding legacy devices no longer certified for use in the U.S.
- The Commission should adopt an accelerated docket procedure that allows licensees to file complaints against manufacturers of interfering boosters. This mechanism would enable carriers to prevent harmful interference at the source rather than reacting piecemeal.
- The Commission should also update their procedures for investigating interference events and devote sufficient resources for timely resolution.