



Jeanine Poltronieri
Assistant Vice President
External Affairs

AT&T Services, Inc.
1120 20th Street, N.W.
Suite 1000
Washington, D.C. 20036
Phone: 202-457-2042
Email: Jp7321@att.com

December 5, 2013

VIA ELECTRONIC FILING

ACCEPTED/FILED

DEC - 5 2013

Federal Communications Commission
Office of the Secretary

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Room TW-A325
Washington, D.C. 20554

Re: AT&T Request for Waiver to Permit Power Spectral Density Model for
800 MHz Cellular Operations in Three Florida Markets,
WT Docket No. 13-202

Petition for Rulemaking Filed by AT&T To Make 800 Cellular Base
Station Power Rules Consistent with Rules for Other Mobile
Broadband Services, **RM 11660**

Dear Ms. Dortch:

This letter is submitted to provide supplemental information about ATT's Request for a Rule Waiver to Permit Power Spectral Density Model for 800 MHz Cellular Operations in Three Florida Markets, filed April 17, 2013 and AT&T's Petition for Expedited Rulemaking, filed February 29, 2012.¹ AT&T requests that its request for waiver be granted quickly and that a rulemaking examining a permanent rule modification also be issued.

¹In the Matter of Amendment of the Commission's Rules Governing Radiated Power Limits in the Cellular Radio Service Frequency Bands, Petition for Rulemaking and Request for Waiver, RM-11660; DA-12-701 ("AT&T Waiver Request") (February 29, 2012) Appendix A. This supplemental filing incorporates by reference and makes a part hereof the filings AT&T has made in its pending Petition for Expedited Rulemaking, RM-11660 and DA-12-701 ("AT&T Petition for Rulemaking"). We ask the Commission to incorporate filings made in each of these dockets into the record of the related docket.

No. of Copies rec'd 0
List ABCDE

Use of a PSD Alternative for Calculating Power in the Cellular Bands Will Not Increase Harmful Interference

AT&T has demonstrated in its Appendices which compare the interference effects on public safety receivers by GSM, UMTS and LTE systems and conclude that a PSD measurement will not increase the possibility of harmful interference to adjacent bands and would maintain the status quo with respect to the potential impact on users of adjacent spectrum, such as the public safety radio service. The Appendices show that this result remains constant whether the cellular licensee holds one license or both the A&B licenses.² This result also remains constant as the antenna height of various technology migration scenarios under study changes: the *relative* interference impacts for each technology migration scenario remain the same for all antenna heights – the individual interference levels change but the relative levels remain the same and the status quo is maintained.

Use of a PSD Calculation Does Not Change the Interference Scenarios Whether or Not Public Safety Rebanding Has Been Completed

In 2008, in response to a CTIA proposal,³ the FCC revised the radiated power rules for certain wireless services, including the Personal Communications Service (“PCS”) and the Advanced Wireless Service (“AWS”), to permit the use of a PSD model for expressing equivalent isotropically radiated power (“EIRP”). Notwithstanding that it found great benefits in using a PSD model, the Commission declined to extend the power revision to cellular radio service for a very narrow reason—because the frequencies immediately adjacent to the cellular bands were, at that time, undergoing significant restructuring. The Commission concluded that it would be prudent to maintain the existing cellular power limits “until [it could] better assess the impact of additional power limit changes” on the possibility of harmful interference to adjacent bands.⁴

Five years have passed since the Commission examined the use of a PSD methodology in the in the cellular bands and during that time the Commission, Public Safety entities and commercial entities have gained more experience with rebanding and a deeper understanding of how interference operates in this newly rebanded spectrum. Rebanding essentially replaced interleaved assignments within the Public

² Appendix A, AT&T Petition for Rulemaking (filed February 29, 2013), March 21, 2013 Attachment, AT&T Waiver Request (filed July 22, 2013).

³ Letter to Marlene Dortch, Secretary, FCC from Paul Garnett, Executive Director, CTIA dated October 20, 2004 (“CTIA Proposal”).

⁴ “Also, because frequencies immediately adjacent to the 800 MHz cellular band and the 2500 MHz BRS/EBS band are still undergoing significant restructuring to support a mixture of technologies and services, we decide to maintain the radiated power limits set forth in the current rules for BRS and EBS stations operating in the 2500 MHz bands, as well as stations operating in the 800 MHz or other bands -- at least until we can better assess the impact of additional power limit changes.” Biennial Regulatory Review – Amendment of Parts 1, 22, 24, 27 and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Service at ¶ 51.

Safety and Specialized Mobile Radio bands with contiguous ones in an effort to mitigate interference between those bands as well as potential interference from the adjacent cellular band. This strategy has worked well for interference that is frequency dependent such as intermodulation, but has been less effective for mitigating overload interference. Overload interference occurs rarely between the cellular and Public Safety bands, but when it occurs, it is driven by power levels and receiver front end filtering. Since Public Safety channels were not moved significantly in frequency, and public safety radio front end design has not changed significantly, rebanding does not significantly mitigate possible overload interference.

Still, it is important to note that (i) Public Safety systems rarely experience overload interference; (ii) in instances where it does occur, the commercial operator typically is not exceeding allowable power limits—rather, the Public Safety receivers typically are overloaded because of front end filters that were not designed to block signals on adjacent commercial frequencies; and (iii) most importantly, a use of a PSD methodology to express power in the cellular bands proposed by AT&T would not increase this interference risk--the received signal strength in Public Safety bands would not increase from the levels they experience today. In other words, using a PSD methodology will not increase the interference risk to public safety systems whether or not rebanding has been completed.

AT&T's Waiver Request Meets the WAIT RADIO Standard Since Grant of the Waiver Will Not Frustrate the Underlying Purpose of the Rule and Grant is In the Public Interest

Under Section 1.925(b)(3) of its rules, the Commission may grant a request for waiver if the applicant demonstrates that: (i) the underlying purpose of the rule would not be served or would be frustrated by its application to the instant case, and that the grant of the requested waiver would be in the public interest; or (ii) in view of unique or unusual factual circumstances, application of the rule(s) would be inequitable, unduly burdensome, or contrary to the public interest, or the applicant has no reasonable alternative.⁵ In this case, as described in the waiver request, AT&T submits that a waiver of the power limits to permit AT&T to use a PSD measurement in the designated south Florida markets will not undermine the purpose of the rule – to minimize interference – and will serve the public interest by allowing AT&T to deploy wideband LTE.

One of the Commission's core missions is to manage spectrum effectively and ensure that licensees do not interfere with each other. 47 U.S.C. § 302. Thus, the Commission establishes power limits on specific services in part to ensure that wireless services in adjacent bands do not cause harmful interference to each other service. As discussed above, as part of its waiver request, AT&T has submitted a study that show that permitting the use of a PSD measurement will not increase interference in any of the subject markets. Therefore the underlying purpose of Section 22.913 will not be frustrated, as the interference environment would remain

⁵ See, 47 C.F.R. §1.925; *WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969).

the same under the PSD calculation as it is today under the current ERP measure. Allowing the alternative measurement maintains the interference protection measures that the Commission found to be reasonable when it established the rule. In addition, as discussed above, the interference environment remains stable whether or not antenna height is changed and remains consistent whether or not rebanding of the public safety spectrum has been completed.

AT&T notes that there has been no public safety opposition to its waiver request and that the use of the 800 interference website, established under Section 90.674 of the Commission's regulations, which requires 24 hour response to public safety requests for interference mitigation in most cases, will satisfy any remaining concerns about interference into public safety systems by AT&T's use of a PSD calculation in the markets at issue. The 800 MHz website can be found at <http://www.publicsafety800mhzinterference.com/CTIAWeb/index.aspx>.⁶ Given that the underlying purpose of the rule will not be undermined by using a PSD calculation and that the expanding LTE will serve the public interest by providing faster service, less latency and serve the goal of increased spectral efficiency, AT&T's waiver request should be granted quickly.⁷

Respectfully submitted,



cc: Roger Noel
Lloyd Coward
Brian Marengo
Moslem Sawez
Nina Shafran
Gabriel Ubieta
Denise Walter
Michael Wilhelm

⁶ AT&T notes that the Commission found that the interference notification procedure found in Section 90.674 was adequate to address public safety concerns regarding interference notification, and allowed Sprint Nextel to exceed channel spacing and bandwidth requirements in the 800 MHz band under the existing technical rules. In the Matter of Improving Spectrum Efficiency Through Flexible Channel Spacing and Bandwidth Utilization for Economic Area-based 800 MHz Specialized Mobile Radio Licensees (WT Docket No. 12-64, WT Docket No. 11-110) (May 24, 2012) at ¶ 18

⁷ AT&T reiterates that a timely resolution of this waiver request is essential and that the original waiver request asked for Commission action by September 2013 so that the numerous steps involved in an LTE upgrade could be begun. See AT&T Waiver Request at 5.