

BEFORE THE  
**FEDERAL COMMUNICATIONS COMMISSION**  
WASHINGTON, D.C.

In the Matter of	)	
	)	
Requests for Waiver of Section 22.913 of the	)	RM-11660
Commission’s Rules to Permit AT&T to Use a PSD	)	DA-12-701
Measurement in the Cellular Bands of a Limited	)	
Number of Test Markets	)	

**REQUEST FOR RULE WAIVER**

Pursuant to Section 1.925 of the Federal Communications Commission's (the "Commission") rules, AT&T Services, Inc., on behalf of AT&T, Inc. and its subsidiaries ("AT&T"), hereby respectfully requests a limited waiver of Section 22.913 of the Commission’s rules.<sup>1</sup> Section 22.913 requires the use of an Effective Radiated Power ("ERP") measure for determining cellular base station power transmission limits. AT&T has proposed<sup>2</sup> that the current rule for cellular base station power limits should be restated to include a power spectral density ("PSD") measure as an alternative to the ERP measure. Offering cellular carriers the option to use a PSD measure for calculating cellular base station power limits would eliminate unintended penalties on the deployment of advanced digital broadband modulation schemes in the cellular bands. The markets for which AT&T seeks a waiver of the ERP requirement are in south Florida and are comprised

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<sup>1</sup> 47 C.F.R. § 22.913.

<sup>2</sup> *In the Matter of Amendment of the Commission’s Rules Governing Radiated Power Limits in the Cellular Radio Service Frequency Bands*, Petition for Expedited Rulemaking and Request for Waiver, RM-11660, DA-12-701 (filed February 29, 2012) ("PFR"). The request for a waiver was not placed on public notice and this narrower request replaces it.

of the contiguous CMA markets of West Palm Beach (CMA072), Miami (CMA012) and Monroe, FL-11 (CMA 370). Exact geographic boundaries are defined by these licenses CGSAs.<sup>3</sup>

Grant of the requested relief would be in the public interest because: (i) the waiver would remove disparities between radio services that limit cellular carriers' ability to deploy the most efficient and advanced modulation techniques;<sup>4</sup> and (ii) the waiver would promote the deployment of mobile broadband services consistent with the policy goals enumerated in the National Broadband Plan. Accordingly, such relief is consistent with the public interest and the Commission's goal of promoting widespread competitive wireless broadband services to all Americans.

### BACKGROUND

On February 29, 2012, AT&T filed a petition for expedited rulemaking and a request for a blanket waiver of 47 C.F.R. § 22.913 pending disposition of its PFR.<sup>5</sup> Thereafter, the Wireless Telecommunications Bureau sought comment on the PFR only, taking no action on the requested waiver.<sup>6</sup>

No carrier commenting on AT&T's proposed rule change opposed the proposed revision to the power limits rule. For example, United States Cellular Corporation ("USCC") said

We agree with AT&T that the FCC should provide assurance in its rules that wireless carriers using L TE will be able to operate with ERP levels sufficient to provide adequate coverage on cellular as well as PCS and A WS frequencies.<sup>7</sup>

Verizon Wireless, while agreeing with AT&T's proposal, argued that *even higher* PSD limits should be adopted by the Commission.<sup>8</sup> Two other carriers commenting on AT&T's PFR sup-

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<sup>3</sup> For CMA 12, the licenses are KNKA225 and KNKA364; for CMA 72: KNKA264 and KNKA355, and for CMA 370: KNKN793 and WPSJ791

<sup>4</sup> See, PFR at 9–12.

<sup>5</sup> See, n. 2 above.

<sup>6</sup> *Wireless Telecommunications Bureau Seeks Comment On Petition For Rulemaking Filed By AT&T to Make 800 MHz Cellular Base Station Power Rules Consistent With Rules for Other Mobile Broadband Services*, DA-12-701 (Released: May 2, 2012).

<sup>7</sup> *Id.*, Comments of USCC at 3.

ported the requested rule change to section 22.913;<sup>9</sup> but sought changes in the relief AT&T requested. One of these two comments expressed some disagreement with different elements of AT&T's original proposal;<sup>10</sup> the other opposed only the request for blanket waiver.<sup>11</sup> Cincinnati Bell's objection misinterpreted AT&T's request to mean that the ERP limits for cellular base stations "should be restated as power spectral density ("PSD") limits."<sup>12</sup> Again, AT&T pointed out in its reply comments that the proposed rule change intended only to permit the use of a PSD *measure as an alternative to, and not as a replacement for*, the ERP standard currently in the rule. Consequently, neither of those comments acts as a bar to this waiver request. Furthermore, even though neither of the comments presents a claim of increased interference, it is worth noting that the market for which the waiver is sought is not adjacent to any market of Cincinnati Bell or Bluegrass Cellular.

In this petition for a waiver of section 22.913 of the Commission's rules, AT&T seeks authority to initiate power spectral density testing and operations in the cellular band in South Florida. The testing and operations will take place subject to conditions intended to assure that public safety systems operating in adjacent bands will not experience an increased risk of interference. Consistent therewith, AT&T respectfully submits this waiver request to employ a pow-

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<sup>8</sup> Comments of Verizon Wireless at 7.

<sup>9</sup> Comments of Broadpoint, LLC d/b/a Cellular One, Cincinnati Bell Wireless LLC, NE Colorado Cellular, Inc., Smith Bagley, Inc., and Union Telephone Company d/b/a Union Wireless ("Cincinnati Bell") RM-11660 filed June 1, 2012; Comments of Bluegrass Cellular, Inc. ("Bluegrass") RM-11660 filed June 1, 2010.

<sup>10</sup> See, Comments of Cincinnati Bell.

<sup>11</sup> Bluegrass Cellular favored an "FCC initiation of a rulemaking to consider modification of FCC Rule Section 22.913 to make cellular Effective Radiated power ("ERP") rules more consistent with other mobile broadband services;" but opposed the grant of the waiver. As AT&T pointed out in its reply comments (and as noted above), the initial, blanket waiver request was never put on public notice. Bluegrass's complaint is, then, moot, especially because the areas for which AT&T seeks a waiver are not contiguous to, or even close to, Bluegrass Cellular's service territories.

<sup>12</sup> Cincinnati Bell Comments at 2. Under this reading of the proposed rule change, Cincinnati Bell feared that limiting ERP to the power spectral density AT&T proposed would require 2G GSM/EDGE systems to pull back their boundaries to cover smaller areas. Obviously, since Cincinnati Bell could continue to use the existing ERP power limit measure of section 22.913 under AT&T's proposal, its cell site boundaries would remain unchanged.

er spectral density measure for cellular base station emission limits in the south Florida markets noted above.<sup>13</sup>

### WAIVER REQUEST

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.<sup>14</sup> In this case, as discussed below, 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 pending the outcome of the proposed rulemaking would be in the public interest.

Carriers have experienced extraordinary increases in the volume of data generated by consumers and businesses as a result of the popularity and ubiquity of smartphones and other data-enabled devices. Having pioneered devices like the iPhone and aggressively promoted the latest technologies and applications, AT&T has also documented that its network has borne the brunt of a substantial amount of this newly generated traffic. Between 2008—the year the 3G iPhone was introduced—and the end of 2010, AT&T invested almost \$33 billion in new spectrum and capital expenditures to upgrade its wireless network, including a 50% increase in wireless network investment from 2009 to 2010.<sup>15</sup> Notwithstanding that massive investment, AT&T remains critically constrained by access to spectrum; yet, if it is to maintain a high-quality level

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<sup>13</sup> See, n.3

<sup>14</sup> See, 47 C.F.R. §1.925; *WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969).

<sup>15</sup> AT&T Inc. 2008 Annual Report at 35, 41; AT&T Inc. Quarterly Report (1Q 2008 10-Q), at 23 (May 7, 2008); AT&T Inc. 2009 Annual Report at 68, 71; AT&T Inc. 2010 Annual Report at 48, 71. This figure also includes the price for Qualcomm spectrum.

of service for its customers, AT&T must nevertheless rapidly and aggressively roll-out LTE services even as it faces these spectrum constraints.

To this end, AT&T plans to deploy LTE carriers on its cellular spectrum in a number of markets beginning the first quarter of 2014 but need authorization to start planning/deployment process by August 2013. While that timeline may not appear imminent, the need for relief as soon as possible is critically important for a number of reasons. First, if AT&T can make use of its existing 800 MHz cell spacing for LTE services, there are great efficiencies in deployment, since the roll-out will use existing infrastructure. Grant of this waiver, then, will enable AT&T to determine if its existing 800 MHz cell spacing is suitable for LTE services and whether site upgrades, such as backhaul, may have to take place to maximize LTE benefits. Second, if testing shows that AT&T must adopt cell spacing that is denser than its existing site inventory, it will have to begin site selection immediately to extend its network infrastructure to a range of new sites. These cell site selections must begin at the earliest possible date because it has become increasingly difficult and time consuming to identify and secure suitable sites.<sup>16</sup> Grant of the requested waiver will allow AT&T to begin timely planning for LTE deployment.

A PSD-based cellular power limit will not cause increased harmful interference to adjacent frequency bands. As noted in its PFR, AT&T compared the potential interference effects of various wireless network arrangements on public safety receivers. The study<sup>17</sup> looked at five different cases that represent AT&T's past, present, and future wireless networks. The cases are composed of GSM, UMTS and LTE systems in various configurations in the cellular band. The

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<sup>16</sup> See, e.g., Reply Declaration of William Hogg, Applications of AT&T Inc. and Deutsche Telekom AG, WT Docket No. 11-65 (filed June 10, 2011) at 26 (available at: <http://apps.fcc.gov/ecfs/document/view?id=7021686835> (last visited Feb. 28, 2012)).

<sup>17</sup> The study is attached to the PFR as Appendix A.

purpose of this comparison was to show that future deployments of 2X2 MIMO<sup>18</sup> LTE in the cellular bands under a PSD limit would maintain the *status quo* with respect to the potential interference impacts on adjacent services—and in particular, the Public Safety services.

For these reasons, AT&T requests that the FCC grant it a waiver to permit it to use the PSD measurements specified in its PFR in lieu of the power limits currently specified in section 22.913 of the rules for testing and operations in the south Florida markets noted above. AT&T fully expects that any such waiver would be conditioned on the outcome of the rulemaking proceeding proposed in its PFR. Grant of the requested relief would be in the public interest because: (i) the waiver would remove disparities between radio services that limit cellular carriers' ability to deploy the most efficient and advanced modulation techniques; and (ii) the waiver would promote the deployment of mobile broadband services consistent with the policy goals enumerated in the National Broadband Plan. Moreover, the waiver—conditioned on the outcome of the proposed rulemaking—would not undermine the deliberative process relative to adopting PSD limits for cellular carriers more broadly. For the foregoing reasons, AT&T urges the Commission to act quickly and grant AT&T permission to use PSD-based power measurements for its cellular systems.

## CONCLUSION

For the reasons discussed above, AT&T respectfully requests that the Commission waive section 22.913 of the rules, which require use of Effective Radiated Power (“ERP”) measure for determining cellular base station power transmission limits, and permit AT&T to initiate power

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<sup>18</sup> To multiply throughput of a radio link, multiple antennas (and multiple RF chains accordingly) are put at both the transmitter and the receiver. This system is referred to as Multiple Input Multiple Output (“MIMO”). A MIMO system with a similar count of antennas at both the transmitter and the receiver in a point-to-point (“PTP”) link is able to increase the system throughput with every additional antenna.

spectral density testing and operations in the cellular band in areas of southern Florida described herein.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "W. Roughton, Jr.", written in a cursive style.

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