

Before the  
Federal Communications Commission  
Washington, DC 20554

In the Matter of )  
)  
AT&T Mobility Spectrum LLC; BellSouth ) WT Docket No. 16-181  
Mobile Data, Inc.; New Cingular Wireless )  
PCS, LLC; and SBC Telecom, Inc. ) File Nos. 0007239621, et al.  
)  
Petition for Limited Waiver of Interim )  
Performance Requirements for 2.3 GHz )  
WCS C and D Block Licenses )

Comments of Tech Knowledge

Tech Knowledge submits these comments to support the Petitioners' request for relief from the interim performance requirements for the 2.3 GHz Wireless Communications Service (WCS) C and D blocks in section 27.14(p)(1)-(2) of the Commission's rules.<sup>1</sup>

The facts in this proceeding are consistent with one of the Commission's classic paradigms for extending or waiving a construction requirement: (1) The technical rules applicable to these spectrum blocks are unique and unusually restrictive and (2) equipment is not yet available that meets the use case for this spectrum (smart grid communications). The Commission has considered these factors sufficient to warrant an extension or waiver of construction requirements in multiple bands, including the WCS band<sup>2</sup> and the 220 MHz band.<sup>3</sup> Moreover, it appears that none of the directly affected parties are opposed to Petitioners' request.

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<sup>1</sup> See Public Notice, Wireless Telecommunications Bureau Seeks Comment Regarding Request for Relief of Certain WCS Construction Requirements, DA 16-606, WT Docket No. 16-181 (Jun. 2, 2016).

<sup>2</sup> See Consolidated Request of the WCS Coal. for Ltd. Waiver of Constr. Deadline for 132 WCS Licenses, DA 06-2461, 21 FCC Rcd. 14134, 14139-141 at ¶¶ 10-13 (WTB 2006) (finding that a 3-year extension was reasonable because WiMAX equipment was not yet widely available and the "relatively restrictive" technical rules "contributed to the unique circumstances of the band").

<sup>3</sup> See Request of Warren C. Havens for Waiver or Extension of the Five-Year Constr. Requirement for 220 Mhz Serv. Phase II Econ. Area & Reg'l Licensees et al., DA 04-2100, 19 FCC Rcd. 12994, 13000-001 (2004) (finding a 3-year extension was reasonable because equipment for the band was generally unavailable and the band's unique channel requirements limited equipment options).

The Commission recognized the unique nature of this WCS spectrum in its 2012 order modifying the technical rules governing the band: “the unique technical challenges associated with allowing a fixed and mobile service to operate adjacent to a broadcasting-satellite service[] justify enacting rules...with more specific obligations and greater regulatory oversight than the Commission requires in other contexts.”<sup>4</sup> The C and D blocks are subject to unusually stringent limits on ground level<sup>5</sup> and out-of-band emissions,<sup>6</sup> and mobile and portable operations are entirely prohibited in these blocks.<sup>7</sup> Deployment in these blocks is also subject to coordination with adjacent Satellite Digital Audio Radio Service (“SDARS”) and Aeronautical Mobile Telemetry (“AMT”) users.<sup>8</sup> These unique technical limitations have prevented licensees from deploying widely available equipment in this spectrum for typical wireless uses cases (e.g., ordinary fixed point-to-point backhaul).<sup>9</sup>

When the Commission established the construction requirements for these blocks, it recognized that deployment in the C and D blocks could be very unlike the typical mobile and fixed point-to-point deployment scenarios with which the Commission (and the wireless industry) is most familiar,<sup>10</sup> but retained its admittedly ambitious<sup>11</sup> approach to deployment in this band because, at the time, the Commission was not convinced that the difficulty of deploying this spectrum merited a less challenging approach.<sup>12</sup> Petitioners have since developed real-world experience with

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<sup>4</sup> Amendment of Part 27 of the Commission’s Rules to Govern the Operation of Wireless Commc’ns Servs. in the 2.3 Ghz Band, 27 FCC Rcd. 13651, 13706 at ¶ 135 (2012) (describing numerous limitations on the C and D blocks) [hereinafter “WCS Reconsideration Order”].

<sup>5</sup> See 47 U.S.C. § 27.50(a)(2).

<sup>6</sup> See 47 U.S.C. § 27.53(a).

<sup>7</sup> WCS Reconsideration Order at ¶ 88.

<sup>8</sup> See *id.* at ¶¶ 150-73; 47 U.S.C. §§ 27.72-27.73.

<sup>9</sup> See WCS Reconsideration Order at ¶ 114.

<sup>10</sup> See WCS Reconsideration Order at ¶¶ 123-26.

<sup>11</sup> Amendment of Part 27 of the Commission’s Rules to Govern the Operation of Wireless Commc’ns Servs. in the 2.3 GHz Band, 25 FCC Rcd. 11710, 11791 at ¶ 197 (2010).

<sup>12</sup> See WCS Reconsideration Order at ¶ 123.

the difficulties of coordinating WCS deployments with SDARS and AMT operations.<sup>13</sup> This hard-won experience has demonstrated that deployments in the WCS band are more difficult and time consuming than in the more typical mobile and fixed point-to-point bands on which the construction requirements were based. As a result, the Commission now has empirical evidence on which it can base a reasonable reevaluation of its initial predictions regarding the difficulties of deployment in this band.

There is no reason to believe that terminating Petitioners' C and D block licenses will result in more rapid deployment of this spectrum. Petitioners have already (1) developed a working relationship with SDARS and AMT licensees and overcome the initial hurdles presented by the unique coordination process for this band, (2) worked with Nokia to develop the equipment necessary for deploying state-of-the-art smart grid systems in the C and D blocks, and (3) begun marketing their smart grid solution to potential utility customers.<sup>14</sup> If the licenses are terminated, this entire process would need to be reset and begun anew. Starting over might be warranted in different circumstances, but is unwarranted here, where there is no indication that Petitioners have acted in bad faith or willfully chosen to ignore the applicable construction requirements.

Finally, granting the Petitioners' request would serve the public's interest in transforming the nation's 19th century electrical grid into a smart grid for the 21st century.<sup>15</sup> The Department of Energy recognized years ago that this "is a colossal task. . . . that must be done,"<sup>16</sup> and yet the process is still in its early stages. With respect to the use of wireless solutions for smart grid communications, utilities have been reluctant to use commercial mobile deployments based on reliability and capacity

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<sup>13</sup> See Petition for Limited Waiver of Interim Performance Requirement for WCS C and D Block Licenses, File Nos. 0007239621, et al. at p. 6 (filed Mar. 29, 2016).

<sup>14</sup> See generally *id.*

<sup>15</sup> See generally Department of Energy, "The Smart Grid: An Introduction" (2009), available at <http://energy.gov/oe/downloads/smart-grid-introduction-0>.

<sup>16</sup> *Id.* at preface.

concerns.<sup>17</sup> The wireless solution in the C and D blocks proposed by Petitioners and Nokia would provide utilities with new options “to build a private, highly secure, reliable and high-capacity LTE network to ensure the safe, reliable and secure delivery of their core electric, gas and water services.”<sup>18</sup> Petitioners’ model would permit utilities to establish their own networks using dedicated spectrum, which would promote smart grid deployment by addressing the reliability and capacity concerns that have slowed utilities’ deployment of wireless smart grid communications.

For the foregoing reasons, Tech Knowledge asks that the Commission grant Petitioners’ request for relief.

Respectfully submitted,

TECH KNOWLEDGE

By: \_\_\_\_\_ /s/ FBCJR

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<sup>17</sup> See Department of Energy, “Communications Requirements of Smart Grid Technologies” at p. 43 (2010), available at [http://energy.gov/sites/prod/files/gcprod/documents/Smart\\_Grid\\_Communications\\_Requirements\\_Report\\_10-05-2010.pdf](http://energy.gov/sites/prod/files/gcprod/documents/Smart_Grid_Communications_Requirements_Report_10-05-2010.pdf).

<sup>18</sup> Press Release, Utility Technologies Council, “UTC Supports New Option for Utilities to Access Spectrum and Equipment for Wireless Communications” (Feb. 10, 2016), available at <https://globenewswire.com/news-release/2016/02/10/809571/10159986/en/UTC-Supports-New-Option-for-Utilities-to-Access-Spectrum-and-Equipment-for-Wireless-Communications.html>.