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Before the  
Federal Communications Commission  
Washington, DC 20554

In the Matter of )  
 )  
M2Z NETWORKS, INC. ) WT Docket No. 07-16  
 )  
Application for License and Authority to )  
Provide National Broadband Radio Service in )  
the 2155-2175 MHz Band )  
  
To: The Wireless Telecommunications Bureau

**PETITION TO DENY**

**AT&T INC.**

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Pursuant to Section 309(d)(1) of the Communications Act, 47 U.S.C. § 309(d)(1), and Section 1.939 of the Commission's rules, 47 C.F.R. § 1.939, AT&T Inc., on behalf of its affiliate, AT&T Mobility LLC (f/k/a Cingular Wireless LLC) ("AT&T"), hereby petitions to deny the above-referenced application filed by M2Z Networks, Inc. ("M2Z").<sup>1</sup> M2Z is requesting the issuance of a 20 MHz license for Advanced Wireless Service ("AWS") spectrum without an auction and for its exclusive use to construct and operate a nationwide wireless broadband network.<sup>2</sup> Few details are offered as to the viability of the proposal. Moreover, M2Z offers an uncertain annual payment pegged to services it may never offer and revenues that may never be generated.<sup>3</sup> There is no basis for a grant of the application – it would be inconsistent with law and the public interest.<sup>4</sup>

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<sup>1</sup> See *Public Notice*, "Wireless Telecommunications Bureau Announces that M2Z Networks, Inc.'s Application for License and Authority to Provide a National Broadband Radio Service in the 2155-2175 MHz Band Is Accepted for Filing," DA 07-492 (rel. Jan. 31, 2007) ("*Public Notice*").

<sup>2</sup> See M2Z Networks, Inc., Application for License and Authority to Provide a National Broadband Radio Service in the 2155-2175 MHz Band, WT Docket No. 07-16 (filed May 5, 2006) ("M2Z Application").

<sup>3</sup> As a recognized provider of wireless broadband services across the country, AT&T has a clear interest in the outcome of the instant application. See *Eleventh Annual CMRS Competition*  
(footnote continued)

## INTRODUCTION AND SUMMARY

M2Z has filed an application with the FCC seeking an exclusive, nationwide license in the 2155-2175 MHz band that the FCC has already allocated to AWS.<sup>5</sup> M2Z urges the FCC to exclude the entire amount of spectrum from the auction process without ever considering competing applications.<sup>6</sup> In return for receiving a 20 MHz nationwide AWS license without having to participate in an auction, M2Z proposes to provide free, basic broadband services, secondary data connectivity for public safety to its network and, if it offers advanced services on

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(footnote continued)

*Report*, 21 FCC Rcd 10947, 10962, 10993-94 (2006). M2Z would compete with AT&T in the nationwide wireless broadband services market if M2Z's application were granted. Thus, AT&T has standing as a party-in-interest to file this petition. See 47 U.S.C § 309(d); *FCC v. Sanders Brothers*, 309 U.S. 470, 476-77 (1940); *Waterman Broadcasting*, 17 FCC Rcd 15742, 15744 n.2 (2002); *Channel 32 Hispanic Broadcasters, Ltd.*, 15 FCC Rcd 22649, 22651 (2000); *Atlantic Radio Communications*, 7 F.C.C.R. 5105, 5106 n.3 (1992). Moreover, AT&T participated in the proceeding below that led to the designation of the 2155-2175 MHz band for AWS, see *New Advanced Wireless Services, Eighth Report and Order*, 20 FCC Rcd 15866, 15871 & n.33 (2005) ("*AWS Eighth R&O*"), and participated and won licenses in Auction No. 66 for spectrum in adjacent bands 1710-1755/2110-2155 MHz, see *Public Notice*, DA 06-2408 (rel. Nov. 29, 2006). As such, it would be harmed by the loss of the opportunity to compete for spectrum at 2155-2175 MHz. See *N.J. TV Corp. v. FCC*, 393 F.3d 219, 221 (D.C. Cir. 2004) (citing *Ranger Cellular v. FCC*, 348 F.3d 1044, 1050 (D.C. Cir. 2003); *CC Distributors, Inc. v. United States*, 883 F.2d 146, 150-51 (D.C. Cir. 1989).

<sup>4</sup> Official notice should be taken of the essential facts herein not otherwise supported by declaration because they consist largely of matters already before the Commission, FCC rules and decisions, and filings and statements by the applicant itself. See, e.g., *Palm Beach Cable Television Co.*, 78 F.C.C.2d 1180, 1183 (1980) (FCC can take official notice of facts and information which are a matter of public record); *Real Life Educational Foundation of Baton Rouge, Inc.*, 8 FCC Rcd 2675, 2676 n.4 (1993) (same); *Rocky Mountain Radio Co.*, 15 FCC Rcd 7166, 7167 (1999) (FCC can take official notice of facts which have independent support in the Commission's records); *AT&T Corporation*, 17 F.C.C.R. 11641, 11651 (2002) (FCC can take official notice of factual issues related to its expertise or which it has prior knowledge).

<sup>5</sup> See M2Z Application at 15-19.

<sup>6</sup> See *id.* at 38-40; see also *id.* at 23 n.59 ("M2Z is proposing that the requested spectrum be assigned without auction . . .").

a subscription basis, payment to the government of an annualized five percent of gross revenues from any such services.<sup>7</sup>

M2Z is a for-profit enterprise seeking to acquire spectrum to provide commercial services nationwide. While the provision of basic broadband services and secondary data connectivity for public safety are laudable goals in the abstract, M2Z's proposal lacks sufficient information to judge concretely whether the proposed service is viable and the alleged benefits are attainable. Thus, the FCC has no basis upon which to grant the extraordinary relief requested – an auction exemption. Moreover, the fee arrangement is discretionary and, in any event, is fatally flawed because it is not tied to any meaningful valuation of the spectrum. It therefore takes on the appearance of a tax which the FCC is without authority to levy. As a result, a grant would be inconsistent with Section 309 of the Communications Act (the “Act”) and otherwise contrary to law.

There are also substantial and material questions of fact whether grant of the application is in the public interest, including whether grant would create harmful interference issues, result in an anticompetitive windfall for M2Z and justify a change in the original public interest bases for allocating the 2155-2175 MHz band to AWS. Additionally, there are substantial questions whether the alleged public safety benefits are real or necessary given the proposals put forward concerning use of 700 MHz spectrum (which already has a public safety set-aside) and whether the proposal will set back rural deployment of advanced broadband services. For all these reasons, the application cannot be granted as in the public interest.<sup>8</sup>

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<sup>7</sup> See *id.* at 22-23, 24-26 & App. 2 at 4.

<sup>8</sup> On September 1, 2006, M2Z amended its application to incorporate a related and separately-filed petition for forbearance from Section 1.945 of the Commission's Rules. See M2Z Networks, Inc., Petition for Forbearance Under 47 U.S.C. § 160(c) Concerning Application of Sections 1.945(b) and (c) of the Commission's Rules and Other Regulatory and Statutory Provisions (filed Sept. 1, 2006) (“M2Z Petition”). Section 1.945 generally precludes a license

(footnote continued)

Assuming *arguendo* further consideration of the proposed service is warranted, the Commission should do so in the context of a rulemaking that considers all means of assigning spectrum at 2155-2175 MHz – not just a single proposed use to a single licensee. A rulemaking is necessary to ensure that (i) the spectrum is put to its highest and best use, (ii) no party is unjustly enriched, and (iii) the value of the spectrum is recovered for the benefit of the public.

## DISCUSSION

### I. THERE ARE SUBSTANTIAL AND MATERIAL QUESTIONS OF FACT AND INSUFFICIENT INFORMATION TO MAKE A PUBLIC INTEREST FINDING

Under Section 309 of the Act, the FCC cannot grant an application where there are substantial and material questions of fact or the Commission lacks sufficient information to determine whether a grant would serve the public interest.<sup>9</sup> M2Z’s proposal fails on both counts.

#### A. The Application Lacks Sufficient Information to Overcome the Auction Presumption in Section 309(j)

Section 309(j) “generally requires the Commission to dispose of mutually exclusive applications by auction.”<sup>10</sup> Among other things, the statute seeks to encourage the efficient,

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grant where there are substantial and material questions of fact or other grounds which preclude a public interest finding. Because there are substantial and material questions of fact and insufficient information to make a public interest finding, and the proposal is otherwise contrary to law, forbearance from these core principles should not be countenanced.

<sup>9</sup> See 47 U.S.C. § 309(d)(2), (e); *Astroline Communications Co. v. FCC*, 857 F.2d 1556, 1562 (D.C. Cir. 1988); *Gencom Inc. v. FCC*, 832 F.2d 171, 181 (D.C. Cir. 1987); *Ranger v. FCC*, 294 F.2d 240, 242 (D.C. Cir. 1961); *Citizens Committee to Save WEFM v. FCC*, 506 F.2d 246, 259 (D.C. Cir. 1974).

<sup>10</sup> *Improving Public Safety Communications in the 800 MHz Band, Report and Order, Fifth Report and Order, Fourth Memorandum Opinion and Order, and Order*, 19 FCC Rcd 14969, 15013 (2004) (“800 MHz Rebanding Order”) (subsequent history omitted); see 47 U.S.C. §309(j); *Implementation of Section 309(j) of the Communications Act - Competitive Bidding, Fifth Report and Order*, 9 FCC Rcd 5532, 5535 (1994) (Section 309(j)(1) requires the Commission to utilize competitive bidding to award initial licenses for spectrum that are reasonably likely to involve the receipt by the licensee of compensation from subscribers in

(footnote continued)

intensive widespread use of spectrum and recover for the public the value of spectrum being licensed, while eliminating unjust enrichment associated with awarding licenses for free.<sup>11</sup> Thus, “Section 309(j) embodies a presumption that licenses should be allocated as a result of an auction to those who place the highest value on the use of the spectrum,” as such entities “are presumed to be those best able to put the licenses to their most efficient use.”<sup>12</sup> Indeed, the Commission has previously determined that AWS spectrum awarded pursuant to a geographic licensing scheme, such as the nationwide licensing proposed by M2Z, triggers the auction requirement set forth in Section 309(j).<sup>13</sup>

M2Z’s proposal is contrary to these basic tenets. By seeking a private award of spectrum outside the auction process with compensation that is both uncertain and not tied to the value of the license, M2Z undermines the basic intent of Section 309(j) to allow market forces to ensure that spectrum will be put to its highest and best use for the benefit of the public. While the application lists a number of claimed countervailing benefits, each is predicated upon a viable service. The application provides *no information*, however, upon which to make a finding that there is even a reasonable likelihood the proposed service will be viable and thus produce the alleged public interest benefits. For example, the application indicates that the basic nationwide

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(footnote continued)

return for enabling those subscribers to receive or transmit communications signals); *see N.J. TV Corp.*, 393 F.3d at 222 (“47 U.S.C.S. § 309(j)(1) seems to require auctioning generally . . .”).

<sup>11</sup> *See* 47 USC 309(j)(3); *Implementation of Section 309(j) of the Communications Act - Competitive Bidding, First Report and Order*, 9 FCC Rcd 7373 (1994).

<sup>12</sup> *NextWave Personal Communications, Inc.*, 15 FCC Rcd 17500, 17513 (2000), *pet. rev. granted*, *NextWave Personal Communications Inc. v. FCC*, 254 F.3d 130 (D.C. Cir. 2001), *aff’d*, 123 S. Ct. 832 (2003).

<sup>13</sup> *See Service Rules for Advanced Wireless Services in the 1915-1920 MHz, 1995-2000 MHz, 2020-2025 MHz and 2175-2180 MHz Bands, Notice of Proposed Rule Making*, 19 FCC Rcd 19263, 19625 (2004) (stating that “[b]ecause the adoption of geographic area licensing would make possible the filing of mutually exclusive applications, which in turn would require us to assign licenses by auction, we also propose competitive bidding rules”).

broadband service will be funded through advertising revenues,<sup>14</sup> but includes no showing of projected advertising revenues or other economic analysis in support of the proposed service. Moreover, no specifics are provided about the planned system design and architecture, and there is insufficient information to determine whether M2Z even has access to sufficient sites to achieve its proposed nationwide coverage claim.<sup>15</sup>

Rather than demonstrating the viability of the proposed service, the application leaves out critical facts with respect to funding to meet its construction goals.<sup>16</sup> For example, M2Z states only that it has “reasonable assurances” that it has sufficient funds to “begin” and “help” to construct and operate its network.<sup>17</sup> While M2Z references access to approximately \$400 million,<sup>18</sup> it does not support this claim or address whether there are any conditions that may limit use of those funds, nor does it show that the \$400 million is sufficient to *complete* a nationwide network and operate on that scale.<sup>19</sup> By contrast, in the 800 MHz rebanding

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<sup>14</sup> See M2Z Application, App. 5 at 2 (noting that “paid advertisements will support the free high-speed service”).

<sup>15</sup> To build a new, nationwide network from scratch will require site availability to support a significant number of base stations. For example, in the 700 MHz band, it is estimated that approximately 37,000 sites will be needed to support a nationwide public safety broadband network. Testimony of Morgan O’Brien, Chairman, Cyren Call Communications, before the Committee on Commerce, Science and Transportation, United States Senate, Feb. 8, 2007. Because of favorable propagation characteristics, this number is substantially lower than what would be necessary in the 2155-2175 MHz bands. Even if M2Z does not intend to build its own network but to rely on the networks of others, no substantiated assurance is given that any such agreements have been reached.

<sup>16</sup> M2Z states that it will commence service within 24 months of grant, and will cover 33% of the U.S. population within 3 years of commencing service; 66% within 5 years of commencing service; and 95% within 10 years of commencing service. See M2Z Application at 12. Requiring licensees to satisfy construction requirements is not unique. See, e.g., 47 C.F.R. § 24.203 (broadband PCS).

<sup>17</sup> See M2Z Application at 8 (emphasis added).

<sup>18</sup> See *id.*

<sup>19</sup> The Commission should therefore take M2Z up on its offer to make available supporting financial information, see M2Z Application at 8 n.16, which information should be made available to parties to the proceeding. See, e.g., *Mobile Communications Holdings, Inc.*,

(footnote continued)

proceeding, the FCC ensured that the rebanding (the costs of which are to be credited to Nextel as an offset against the payment of monies by it for spectrum it is receiving at 1.9 GHz) will be completed by requiring Nextel to establish an irrevocable letter of credit to fund the reconfiguration and serve as insurance against a Nextel default.<sup>20</sup>

Thus, the application offers insufficient evidence to demonstrate that Section 309(j)'s goal of ensuring efficient, intensive and widespread use of spectrum will be satisfied in the absence of an auction. As a result, the FCC cannot exercise its expert judgment that the system is viable and will produce the stated benefits needed to make a public interest finding.<sup>21</sup> While M2Z acknowledges the FCC's ability to make a finding that the M2Z license has terminated "[i]f M2Z's build-out falters,"<sup>22</sup> this is not enough to base an affirmative finding that the proposal will serve the public interest.<sup>23</sup> Failure to meet buildout, especially at a later stage, will mean valuable spectrum will have been removed from use for years – potentially without any compensation if premium services are not yet offered – before the spectrum can be relicensed

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(footnote continued)

*Disclosure Order*, 18 FCC Rcd 133, 134 (IB/SD 2003) (finding that "petitioners to deny 'generally must be afforded access to all information submitted by licensees that bear upon their applications'" (quoting *Examination of Current Policy Concerning the Treatment of Confidential Information Submitted to the Commission*, 13 FCC Rcd 24816, 24838 & n.109 (1998)). To the extent necessary, the Commission can adopt a protective order to protect access to confidential information. See *Mobile Communications Holdings, Inc.*, 18 FCC Rcd at 134-35.

<sup>20</sup> See *800 MHz Rebanding Order*, 19 FCC Rcd at 15081-82 (describing significant obligations imposed "to ensure that the public receives full benefit in exchange for making other spectrum available to Nextel").

<sup>21</sup> See 47 U.S.C. § 309(a) (Commission cannot grant an application without finding that the public interest, convenience and necessity will be served); *Achernar Broadcasting v. FCC*, 62 F.3d 1441, 1445 (D.C. Cir. 1995) (where the FCC fails to exercise expert judgment, its decision is not entitled to deference).

<sup>22</sup> M2Z Application at 5.

<sup>23</sup> See *id.* at 5, 33.

and put into use. By contrast, auctions put the spectrum in the hands of those best able to make use of it and recover value upfront for the public.<sup>24</sup>

There is likewise insufficient evidence to demonstrate that unjust enrichment will be avoided and the value of the spectrum recovered for the benefit of the public. The proposed five percent usage fee is not guaranteed. According to the conditions on which M2Z seeks to have its license conditioned, M2Z “*may* make available ‘Premium Services’ on a subscription basis, *in which event* it shall pay to the U.S. Treasury, on an annual basis, a voluntary usage fee of 5% of the gross revenues derived from such Premium Service.”<sup>25</sup> Even if premium services are offered,<sup>26</sup> the fee and any revenues to the Treasury it may generate are contingent upon the viability of the proposed service.<sup>27</sup> Again, there is simply no basis to make this judgment based on the information in the application.<sup>28</sup> Moreover, there is no attempt to adequately determine

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<sup>24</sup> See, e.g., *Mobile Communications Corporation of America v. FCC*, 77 F.3d 1399, 1405 (D.C. Cir. 1996) (“*Mtel*”) (“[A]n auction will yield reimbursement to the public for the transfer of the entitlement . . . and, because the party able to use the license most efficiently will be able to bid the most, the license will end up in the hands of the firm best able to develop its potential.”) (citing legislative history of Section 309(j)). Even if an auctioned license is later forfeited for failure to meet buildout requirements, value to the public will have been recovered through the payment of auction obligations for the license.

<sup>25</sup> See M2Z Application, App. 2 at 4 (emphasis added).

<sup>26</sup> See *id.* at 4.

<sup>27</sup> See *id.* at 32 (“As M2Z’s business grows, the ‘spectrum use’ fee *could* also generate a sizable contribution to the U.S. Treasury.”) (emphasis added) (footnote omitted).

<sup>28</sup> See *Achernar*, 62 F.3d at 1445.

the present value of the requested license, which could be substantial,<sup>29</sup> or equate that value to the fee to ensure that the value of the spectrum is recovered and unjust enrichment avoided.<sup>30</sup>

While Section 309(j) does allow the FCC to avoid mutual exclusivity (and hence the auction requirement), it may only do so where the public interest requires such an approach.<sup>31</sup> This is a high hurdle. The Commission has recognized that such a public interest finding can be made only in extraordinary circumstances, as cited by the Commission when it awarded spectrum rights to Nextel without auction to resolve interference to public safety operations in the 800 MHz band:

We recognize that the granting of valuable spectrum rights to Nextel – or to any party – without recourse to the competitive bidding process is highly unusual. However, given the extraordinary circumstances present in this proceeding, including issues involving the safety of life and property – and absent harm to other interests of the public – we are convinced that our decision in this regard is consistent with the public interest. In reaching this decision, we are mindful that Congress has expressed a strong statutory preference in the vast majority of circumstances for use of auctions to assign spectrum rights.<sup>32</sup>

This unique public interest circumstance – the presence of imminent safety of life issues – is not present here.

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<sup>29</sup> Ignoring potential discounts for unpaired spectrum or premiums for an unpaired license, based on 2005 figures from the Auction No. 58 PCS auction, the spectrum could generate about \$5 billion in auction revenue. *See* M2Z Application, App. 5 at 24. M2Z does not attempt to ascertain the present value the proposed license, which it acknowledges will be used to provide AWS, *see id.* at 16 n.38, based on the more recent auction of adjacent AWS spectrum as part of Auction No. 66.

<sup>30</sup> In addition, because the fee does not reasonably reflect the value of the license, the FCC lacks authority to collect it. *See* discussion Section II. The resulting windfall to M2Z is also discussed in Section I.C, below.

<sup>31</sup> 47 U.S.C. § 309(j)(6)(E); *cf. Benkelman Telephone Co. v. FCC*, 220 F.3d 601, 605-606 (D.C. Cir. 2000) (Section 309(j)(6)(E) neither requires the Commission to avoid mutual exclusivity, nor to create it; the touchstone is what best serves the public interest).

<sup>32</sup> *800 MHz Rebanding Order*, 19 FCC Rcd at 15081.

To the contrary, grant of the application in the absence of sufficient information will undermine the efficiency, unjust enrichment and value-to-the-public goals set forth in the auction statute. Granting the application without requiring sufficient information will gut the high bar now set to avoid an auction creating a horrible precedent and inviting follow-on “me too” applications that will be impossible to distinguish. The result is that the FCC will be faced with any number of applications for an exclusive-use license based on a loose/contingent fee and alleged public safety benefits without any showing that those benefits are even realistically achievable. The Commission must uphold a higher standard to avoid giving spectrum away based on empty promises.<sup>33</sup>

**B. There Is a Substantial Question and Insufficient Information to Determine Whether Grant of the Application Would Create Interference Issues**

M2Z claims that its proposal would not cause interference to other licensees. Its actual commitment, however, as memorialized in the conditions attached to its application, is limited to protecting against interference to incumbent licensees who will remain in the band until relocated pursuant to prior Commission orders.<sup>34</sup> No condition is affixed to specifically protect against interference to new AWS licensees in the surrounding bands, other than a general commitment that M2Z’s out-of-band emissions (“OOBE”) will meet the 43 dB + 10 log (P) dB limit.<sup>35</sup> M2Z states only that it will “work cooperatively” to avoid interference to new entrants,

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<sup>33</sup> The proposed elimination of the 2155-2175 MHz spectrum from competitive bidding also will reduce the revenue available from auctions, thus potentially undermining the Bush Administration’s proposed budget, which seeks \$21 billion in wireless license sales through 2009. See Eric Zeman, *Bush Budget Seeks \$21 Billion in Wireless License Sales*, *Wireless Week*, Feb. 6, 2007.

<sup>34</sup> See M2Z Application, App. 2 at 4; see also *id.* at 13 (“M2Z will ensure that its network operates in such a manner that permits all *then-existing* Commission licensees to enjoy an operating environment free of all harmful interference.”) (emphasis added).

<sup>35</sup> See *id.* at 21 & App.2 at 4.

and that none is expected because of the planned technologies it intends to use.<sup>36</sup> In the absence of specific service rules that would govern M2Z's operations, however, it is impossible to evaluate this claim.

As explained in the attached declaration, the primary interference concern relates to interference between the Time Division Duplex ("TDD") system M2Z proposes to deploy and adjacent systems in the AWS bands using Frequency Division Duplex ("FDD") technology.<sup>37</sup> Interference between TDD and FDD systems is well known. The Commission itself has correctly noted that such systems "generally require a guard band between their band of operation and adjacent bands to minimize the potential of harmful interference."<sup>38</sup> There is also an extensive record in the AWS proceeding demonstrating that it is not feasible to operate TDD systems adjacent to FDD systems absent large guard bands or geographic separation. For example:

- "AT&T Wireless appreciates the Commission's commitment to technical flexibility, including the use of time division duplex ("TDD") technologies, but it is concerned about the severe interference TDD causes to frequency division duplex ("FDD") operations in adjacent bands. . . . [A]uthorizing TDD operation in the AWS spectrum would require the creation of large guard bands and the adoption of stringent power limitations. Thus, rather than further the Commission's goals of flexible and efficient spectrum use, licensing unpaired blocks for TDD purposes would impede the speedy deployment of advanced wireless telecommunications services." AT&T Wireless Services, Inc. Comments in WT Docket No. 02-353 at 8 (Feb. 7, 2003).
- "[I]f the Commission were to assign unpaired spectrum in the AWS bands, guard bands would be required between the paired [FDD blocks] and unpaired [TDD] spectrum blocks, or TDD uses in the unpaired spectrum would need to be limited to low power devices suitable for only indoor environments." Motorola, Inc. Comments in WT Docket No. 02-353 at 8 (Feb. 7, 2003).

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<sup>36</sup> See *id.* at 19, 20-21.

<sup>37</sup> See Declaration of David Shively, PhD, appended hereto as Attachment A ("Technical Declaration").

<sup>38</sup> *Interim Report: Spectrum Study of the 2500-2690 MHz Band – The Potential for Accommodating Third Generation Mobile Systems* (Nov. 15, 2000).

- “The use of unpaired spectrum and the associated deployment of time division duplex (‘TDD’) systems adjacent to paired allocations raise[s] serious interference concerns and should be avoided.” Cingular Wireless LLC Reply Comments in WT Docket No. 02-353 at 8 (Mar. 14, 2003).
- “Even with the introduction of tighter RF filtering requirements, interference caused by TDD and FDD co-existence would be severe.” Nokia Inc. Comments in WT Docket No. 02-353 at 1-2 (Feb. 7, 2003).
- “The use of unpaired spectrum and the associated deployment of TDD systems adjacent to paired allocations has typically raised interference concerns and is considered problematic.” Lucent Technologies Inc. Comments in WT Docket No. 02-353 at 1 (Feb. 7, 2003).

These concerns apply equally to the proposed operation of a TDD system in the 2155-2175 MHz band vis-à-vis interference with adjacent systems in the 2110-2155 MHz AWS-1 band that employ FDD operations.<sup>39</sup> Thus, interference would arise from TDD mobiles that are transmitting in close proximity to an AWS-1 mobile.<sup>40</sup> Furthermore, the use of TDD directly adjacent to FDD could cause an interference issue from the high power FDD base station (as mandated by the AWS-1 service rules to be in the 2110-2155 MHz band<sup>41</sup>) to the TDD receivers, which otherwise would not happen.<sup>42</sup>

While M2Z suggests that its TDD system can operate without harmful interference to adjacent FDD systems (or vice versa), it fails to provide any technical analysis to sustain its assertion that TDD can coexist with adjacent FDD technologies.<sup>43</sup> Instead, it simply asserts without support that its use of adaptive antenna technologies and orthogonal polarizations will

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<sup>39</sup> Technical Affidavit at 2.

<sup>40</sup> *Id.* at 1.

<sup>41</sup> *See Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands*, 18 FCC Rcd 25162, 25024 (2003) (“[W]e determine that it is best not to permit base and mobile stations to operate in the same AWS bands — which effectively prevents TDD systems from operating in those bands”).

<sup>42</sup> *See* Technical Declaration at 2.

<sup>43</sup> *See id.* at 1-2.

mitigate harmful interference, citing a 2004 ITU report.<sup>44</sup> That report, however, is inconclusive as to whether these mitigation techniques are sufficient to resolve interference in the absence of a guardband in all cases, and which mitigation techniques would be used for base-to-base interference, mobile-to-mobile interference, etc. Furthermore, the M2Z proposal makes no mention of whether its proposal contemplates the use of guardbands, which decrease overall spectral efficiency.<sup>45</sup> Moreover, serious questions previously have been raised about the practicality of using adaptive antennas for system-wide deployment, particularly in urban areas, which the M2Z application does not address.<sup>46</sup>

In any event, subsequent to the ITU report, the United Kingdom's Office of Communication ("Ofcom") commissioned an independent study, completed in November 2006, which took into account the mitigation techniques described in the ITU report.<sup>47</sup> The Ofcom Study reaffirms the FCC's prior incompatibility findings, and concludes that even with appropriate interference mitigation, "FDD/TDD co-existence at 5 MHz offset (*i.e.*, operation in an adjacent channel) is not feasible for macro cellular deployment."<sup>48</sup> Among the highlights:

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<sup>44</sup> See M2Z Application at 14 & n.35 (citing Mitigating Techniques to Address Coexistence between IMT-2000 Time Division Duplex and Frequency Division Duplex Radio Interference Technologies within Frequency Range 2500-2690 MHz Operating in Adjacent Bands and in the Same Geographic Area, Rep. ITU-R M.2045 (2004)).

<sup>45</sup> See, e.g., CTIA *Ex Parte* Presentation in WT Docket No. 02-353, Outline at 1 (Sept. 24, 2003)

<sup>46</sup> See, e.g., *id.*, Outline at 3 ("The adaptive antenna can bring very high theoretical efficiency in interference mitigation. However, such techniques are often impractical to implement from installation point of view, especially in an urban area. Adaptive antennas can be deployed to isolate hot spot interference problems but to use it for a technology deployment system-wide comes with inherent disadvantages, including high deployment cost, high equipment cost and inconsistent performance.").

<sup>47</sup> See Technical Declaration at 1-2 (citing *2500-2690 MHz, 2010-2025 MHz, and 2290-2302 MHz Spectrum Awards – Engineering Study (Phase 2)*, Mason Communications Ltd (Nov. 2006) ("Ofcom Study")). The study was done for 2500-2690 MHz, 2010-2025 MHz and 2290-2302 MHz systems, but is equally applicable here. See Technical Declaration at 2.

<sup>48</sup> *Id.* at 7.

- “Interference between mobiles (FDD and TDD or TDD and TDD) was excessive in all scenarios modeled, for short propagation paths (10 metres or less);”
- “[W]orst-case analysis demonstrated that FDD/TDD, and TDD/TDD, co-existence is not feasible” at a 5 MHz offset — *i.e.*, the equivalent of operating M2Z’s proposed network adjacent to an FDD or TDD system operating in the AWS-1 band;
- The worst-case interference mode is base station to base station, for which a separation distance of significantly greater than 1km was predicted to be required between base stations to avoid interference; and
- UMTS FDD base stations and WiMAX ‘fixed subscriber stations’ require a separation distance of more than 1km.

In sum, M2Z’s bare assertion that it will “ensure that M2Z is a good neighbor”<sup>49</sup> is, without more, an insufficient basis upon which to make a finding of non-interference. Merely stating that M2Z will use methods that enable it to avoid harmful interference does not make it so, particularly on an issue where the likelihood of interference between the two technologies are so well known. A substantiated technical showing of non-interference is required.<sup>50</sup>

**C. There Is a Substantial Question and Insufficient Information to Determine Whether Grant of the Application Would Result in a Windfall to M2Z**

The Commission has repeatedly found that a grant of commercial wireless spectrum rights outside the auction context (to the extent otherwise permissible) must avoid conferring a windfall upon, or unjustly enriching, the recipient of the license.<sup>51</sup> M2Z acknowledges as much, yet claims that the payment of the spectrum-based usage fee eliminates any potential windfall resulting from an award of an exclusive, nationwide license outside the competitive bidding

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<sup>49</sup> M2Z Application at 20-21.

<sup>50</sup> *See, e.g., Achnar*, 62 F.3d at 1445 (FCC adjudicatory decisions must be supported by substantial evidence) (citing *Kisser v. Cisneros*, 14 F3d 615, 619 (D.C. Cir. 1994).

<sup>51</sup> *See, e.g., Mtel*, 77 F.3d at 1406; *800 MHz Rebanding Order*, 19 FCC Rcd at 14974-75, 15081-82.

process.<sup>52</sup> As detailed above, this is not the case for a number of reasons: first, the fact of any payment is uncertain; second, even if the payment were assured, there has been no quantification of the amount of the fee to be paid or adequate assessment of the current value of the license, and thus a determination of whether or not a windfall will result cannot be made; and third, in any event, the proposed fee does not recover value for the use of the spectrum to provide basic services, which will generate a benefit in the form of advertising revenues for M2Z. Under these circumstances, a substantial and material question of fact exists as to whether grant of the application will result in a windfall to M2Z that will result in an unfair competitive advantage to M2Z and will harm the market.<sup>53</sup>

**D. There Is a Substantial Question Whether Grant of the Application Would Obviate the Original Public Interest Bases for the 2155-2175 MHz AWS Designation**

When the Commission decided to extend the AWS designation in 2005 to include the 2155-2175 MHz band, it did so primarily to create valuable contiguous spectrum but also to make additional spectrum available for small businesses. Specifically, the Commission concluded that “[b]ecause the 2155-2175 MHz band is adjacent to the 2110-2155 MHz and 2175-2180 MHz bands that have already been designated for AWS, an AWS designation for this band will create 70 MHz of contiguous spectrum that will promote the rapid introduction of new technologies and service offerings, and will foster the use of the highest potential spectrum.”<sup>54</sup> It also found that “the provision of additional spectrum that can be used to support AWS can

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<sup>52</sup> See M2Z Application at 31-32.

<sup>53</sup> See *Nationwide Wireless Network Corp.*, 9 FCC Rcd 3635, 3639-40 (1994).

<sup>54</sup> *New Advanced Wireless Services, Eighth Report and Order, Fifth Notice of Proposed Rule Making, and Order*, 20 FCC Rcd 15866, 15872 (2005) (“*AWS Eighth R&O*”); see also *id.* at 15871 (recognizing that “contiguous spectrum created by such a designation would create synergies in equipment design and facilitate the introduction of multiple AWS licensees using large spectrum blocks, possibly providing opportunities for asymmetric spectrum usage”).

directly benefit small business entities by providing new opportunities for the provision of innovative new fixed and mobile wireless services by such entities.”<sup>55</sup>

The M2Z proposal, if granted, would obviate these prior public interest findings that a large block of contiguous spectrum would facilitate the highest use of the spectrum and provide new opportunities for the provision of AWS by small entities. M2Z does not address these prior public interest findings and, therefore, offers no reasoned basis for the FCC to change course now and find that M2Z’s proposed use represents the highest and best use of the spectrum.<sup>56</sup> Accordingly, there are substantial and material questions of fact whether M2Z’s proposal represents the highest and best use of the spectrum for the benefit of the public.

**E. There Is a Substantial Question Whether the Alleged Public Safety Benefits Are Real or Necessary Given Other Options Before the FCC**

There is also a substantial question whether the stated benefits to public safety are overstated or even illusory. As an initial matter, use of M2Zs network for public safety interoperability purposes is not unique. Wireless Priority Service (“WPS”)<sup>57</sup> is offered by a number of existing CMRS licensees, including AT&T, and provides *priority* access to wireless networks to national security and rescue workers during emergencies.<sup>58</sup> By contrast,

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<sup>55</sup> *Id.* at App. B § E.

<sup>56</sup> See *United Church of Christ v. FCC*, 707 F.2d 1413, 1425 (D.C. Cir. 1983) (“[A]brupt shifts in policy do constitute ‘danger signals’ that the Commission may be acting inconsistently with its statutory mandate.”); *Greater Boston Television Corp. v. FCC*, 444 F.2d 841, 852 (D.C. Cir. 1970) (“[A]n agency changing its course must supply a reasoned analysis indicating that prior policies and standards are being deliberately changed . . .”).

<sup>57</sup> The term “Wireless Priority Service” is synonymous with the term “Priority Access Service.” See *Customer Proprietary Network Information – Wireless Priority Service, Letter*, 19 FCC Rcd 1421, 1421 n.2 (WCB & WTB 2004).

<sup>58</sup> See *Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Agency Communication Through the Year 2010, Second Report and Order*, 15 FCC Rcd 16720, 16721 (2000); 47 C.F.R. Part 64, Appendix B.

connectivity to M2Z's basic network would be on a *secondary* basis.<sup>59</sup> Such "secondary" use is not in the best interest of public safety entities; they need a robust network that can be relied on in the first instance.

There is also a substantial question as to whether an additional broadband, interoperable public safety network is necessary in light of a number of ongoing developments. For example, the Department of Homeland Security just released the results of a nationwide survey of first responders and law enforcement which demonstrated "significant level of interoperability across the nation."<sup>60</sup> Beyond the current "significant" level of interoperability, however, the FCC also has proposed to reallocate 12 MHz of the 700 MHz band public safety spectrum for use by a single, nationwide, interoperable, broadband public safety network.<sup>61</sup> This proposal has garnered widespread support from AT&T and others.<sup>62</sup> Conversely, Cyren Call and public safety organizations are lobbying Congress to reallocate half of the 60 MHz commercial allocation in the 700 MHz band for a national public safety broadband communications network,<sup>63</sup> and Frontline Wireless has just announced plans to request the designation of 13 MHz of the 700 MHz commercial allocation for a national first responder network that would give priority access to public safety during emergencies but would be otherwise open to commercial use on a

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<sup>59</sup> See M2Z Application at 4, 24-25, App. 4 at 4.

<sup>60</sup> DHS Press Release, "Nationwide Baseline Survey Findings Show Significant Levels of Interoperability Across the Nation" (Dec. 8, 2006).

<sup>61</sup> *Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band*, PS Docket No. 06-229, *Ninth Notice of Proposed Rulemaking*, FCC 06-181 (rel. Dec. 20, 2006), *summarized*, 72 Fed. Reg. 1201 (Jan. 10, 2007).

<sup>62</sup> The proposal also calls for permitting public safety licensees to make spectrum available on a secondary basis for use by commercial licensees, which provides a funding source for public safety to build interoperable communications networks.

<sup>63</sup> See John Eggerton, *FCC Hears Cyren Call of Interoperability*, *Broadcasting & Cable*, Feb. 8, 2007.

wholesale basis.<sup>64</sup> Finally, Congress has committed nearly \$11 billion for several priority programs, including \$1 billion for public safety interoperability grants,<sup>65</sup> and CMRS providers (including AT&T) have worked extensively with a variety of vendors to develop a suite of broadband services targeted for public safety use.<sup>66</sup>

Given these developments, there is a substantial question whether M2Z's proposal, in context, is needed for public safety interoperability purposes. Thus, even assuming *arguendo* the benefits cited in the M2Z application can be realized, the proposal cannot be considered in a vacuum. The Commission must determine whether the proposed incidental provision of *secondary* data connectivity to public safety is warranted in light of these other efforts to *directly* foster public safety interoperability in other bands, or whether there are other higher and better uses for the spectrum when viewed in this broader context.

**F. There Is a Substantial Question Whether the Proposal Could Hamper Rural Deployment of Advanced Broadband Services**

While M2Z proposes to make free, basic broadband service available to 95% of the U.S. within 12 years of receiving a license grant,<sup>67</sup> claiming that this will encourage multiple broadband platforms and higher speeds that will be “especially pronounced in rural areas,”<sup>68</sup> this

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<sup>64</sup> See Jeffrey Silva, *Frontline: Another Player in the Wrestling Match for 700 MHz Public Safety Spectrum*, RCR Wireless News, Feb. 26, 2007; *New Frontline Plan Said to Require No Legislation*, Communications Daily, Feb. 27, 2007, at 2-3.

<sup>65</sup> See Deficit Reduction Act of 2005, Pub. L. No. 109-171, §§ 3004-3012 (2006).

<sup>66</sup> On May 2, 2006, at Rash Field in the Inner Harbor of Baltimore, Maryland, AT&T participated in a demonstration of the wide variety of public safety/national security applications possible over commercial UMTS/HSDPA networks via a commercial IP multimedia subsystem (“IMS”). A similar demonstration was conducted last month in Washington, DC. IMS permits the sharing of different media during a single transmission – *i.e.*, numerous applications such as voice communications, video feeds, and file transfers can be utilized simultaneously.

<sup>67</sup> See M2Z Application, App. 2 at 2 (operations to commence within 24 months of license grant, and 95% coverage to be met within 10 years of commencement of operations).

<sup>68</sup> See *id.* at 29.

may not be the case. To the contrary, it is possible the proposal may have the affect of discouraging the provision of advanced services in rural areas. A company may be willing to roll-out advanced services in less-populated rural areas if there are no broadband options available. If free, basic service is promised or made available by M2Z as a result of its subsidized spectrum grant, there would be less incentive to expend the resources necessary to roll-out more advanced services, resulting in less competition. This situation is exacerbated by the fact that competing broadband providers may be discouraged from investing in capital intensive rural markets just from the possibility of a free broadband service being provided by M2Z during the 12-year buildout period. Thus, there is a substantial question whether the M2Z proposal will actually set back rural deployment of advanced broadband services.

## **II. THE COMMISSION LACKS AUTHORITY TO COLLECT A FIVE PERCENT USAGE FEE**

In any event, the proposal cannot be granted because the Commission lacks authority to collect the proposed usage fee. One of the key components of M2Z's application is its proposal to pay a five percent usage fee based on gross revenues of any "premium" subscription services it may offer. While the FCC has authority to impose a payment requirement on a licensee to avoid unjust enrichment and an anticompetitive windfall, it must be reasonably related to the *value* of the spectrum resource being received. Here, there is no attempt to value the spectrum based on recent auction revenues for adjacent spectrum or quantify the monies that may be generated by the proposed fee. The fee, therefore, is in the nature of a gross receipts tax, which the FCC has no authority to levy. For this reason alone, the application should be denied.

In the *Mtel* case, the D.C. Circuit considered the FCC's authority under Section 4(i) of the Act to impose a payment for a license that, but for the FCC's pioneer preference policy,

would have fit Congress's criteria for an auction.<sup>69</sup> The FCC required Mtel to pay "either ninety (90) percent of the lowest winning bid for a nationwide narrowband PCS license or three million dollars (\$3,000,000) less than the lowest winning bid for a nationwide narrowband PCS license, whichever is less."<sup>70</sup> The FCC concluded that "the 'measure' of the charge for Mtel is precisely the one identified in [*National Cable Television Ass'n v. FCC*, 415 U.S. 336 (1974)] as the only proper measure – the value of the license to the recipient. *That value is determined by the auction price* – the value that bidders are willing to pay – discounted for Mtel's special circumstances."<sup>71</sup> The court upheld the FCC's finding that the imposition of a payment requirement under these circumstances was "necessary in the execution of [the Commission's] functions" under Section 4(i) to ensure that the public interest in preventing unjust enrichment would be served.<sup>72</sup>

Likewise, in the *800 MHz Rebanding Order* oft-cited by M2Z, the FCC adopted a "value for value" approach in awarding a license outside the auction process. In that case, the Commission was seeking to resolve unacceptable interference to public safety operations in the 800 MHz band. It did so by requiring Nextel to surrender certain spectrum in the 800 MHz band and pay to reconfigure the band to separate incompatible spectrum uses that contributed to the

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<sup>69</sup> See *Mtel*, 77 F.3d at 1405.

<sup>70</sup> *Nationwide Wireless Network Corp.*, 9 FCC Rcd at 3641. The discount in Mtel was based on the fact the FCC imposed more stringent build-out requirements on Mtel than on the other nationwide narrowband PCS licensees and the fact that the FCC altered its prior decision not to impose a payment (resulting in additional transaction costs for Mtel).

<sup>71</sup> *Id.* at 3642 (emphasis added). In *National Cable*, as subsequently described, the Supreme Court struck down Commission fees that the Court perceived as an effort "to recover from regulated parties costs for benefits inuring to the public generally." *Skinner v. Mid-American Pipeline Co.*, 490 U.S. 212, 223-24 (1989). The Court in *National Cable* said that the only proper measure of the fee was "value to the recipient." *National Cable*, 415 U.S. at 342-43, 344.

<sup>72</sup> *Mtel*, 77 F.3d at 1406 (citing 47 U.S.C. §§ 154(i), 309(a)). While the court upheld the FCC's authority to impose the payment condition, it remanded for consideration of Mtel's reliance interests. *Id.* at 1407.

interference problem. In exchange, the Commission awarded Nextel 10 MHz of nationwide spectrum in the 1.9 GHz band. To ensure that “Nextel does not realize any windfall gain,” it conferred the 1.9 GHz spectrum rights on a “value for value” basis. Under this approach, Nextel will be credited with the value of spectrum being relinquished plus the 800 MHz rebanding and 1.9 GHz clearing costs it incurs. To the extent the value of the 1.9 GHz spectrum ultimately exceeds these costs, Nextel must pay the difference to the U.S. Treasury.<sup>73</sup> The value of the 1.9 GHz spectrum was determined by examining recent secondary market transactions involving like spectrum and past auction trends.<sup>74</sup>

In both of these cases, there were extraordinary circumstances leading to a deviation from the norm of mutually-exclusive auctioned licenses that are not present here. In the *Mtel* case, the Commission had granted a pioneer’s preference entitling Mtel to be granted a non-mutually-exclusive license award at a later date. The preference was granted before Section 309(j) became law, when lotteries were still in effect. After Section 309(j) was enacted, the Commission needed to auction the licenses available to other applicants, who would thus have to pay market value. The Commission had not intended the pioneer’s preference to provide such a windfall to the awardee, and it found that a free pioneer’s preference license would skew the value of the other licenses in the auction and thereby jeopardize the integrity of the auction scheme mandated by Congress. As a result, the Commission determined that the public interest required conditioning the noncompetitive grant to Mtel on payment of an amount based on the auctions of other comparable licenses.<sup>75</sup>

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<sup>73</sup> See *800 MHz Rebanding Order*, 19 FCC Rcd at 14975.

<sup>74</sup> See *id.* at 15110-12.

<sup>75</sup> See *Nationwide Wireless Network*, 9 F.C.C.R. at 3640-41, 3643; see also *Mtel*, 77 F.3d at 1405.

In the *800 MHz Rebanding Order*, the Commission found that abatement of interference to public safety communications would necessitate extensive reshuffling of spectrum that would ultimately result in Nextel being moved to alternative spectrum. Because Nextel's licenses were being modified, rather than Nextel being granted an additional license for virgin spectrum, the Commission concluded that the license at issue was not an "initial" license to which auctions would be applicable. Moreover, the FCC found that auctioning the new band would have raised significant revenue but would not have solved the interference problem, which required moving Nextel away from its existing spectrum assignments. Given that the band to which Nextel was being relocated would otherwise have been auctioned and was deemed more valuable than Nextel's existing licenses, the Commission determined that the public interest required that Nextel be allocated responsibility for the cost of rebanding and be subject to anti-windfall payments.<sup>76</sup> M2Z's proposal bears no resemblance to the extraordinary circumstances invoked by the Commission to deviate from the auctioned mutually exclusive application model in these cases.

M2Z also cites the *DTV Order* for support that the FCC has authority to collect the proposed fee.<sup>77</sup> As a threshold matter, that case involved the use of broadcast spectrum for ancillary and or supplementary services provided on a subscription or paid basis,<sup>78</sup> and a specific statutory provision (Section 336(e) of the Act) both authorized and required the Commission to establish a fee for such services that would serve as a proxy for an auction.<sup>79</sup> Moreover, the fee was not for grant of a license, but for the licensee's optional decision to take advantage of the

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<sup>76</sup> *800 MHz Rebanding Order*, 19 F.C.C.R. at 15010-17.

<sup>77</sup> See, e.g., M2Z Application at 31-32 & n.96 (citing *Fees for Ancillary or Supplementary Use of Digital Television Spectrum Pursuant to Section 336(e)(1) of the Telecommunications Act of 1996*, 14 FCC Rcd 3259 (1998) ("*DTV Order*").

<sup>78</sup> 47 U.S.C. § 336(e)(1).

<sup>79</sup> See *DTV Order*, 14 FCC Rcd at 3261; 47 U.S.C. § 336(e)(2).

statutorily conferred right to provide particular types of revenue-generating services.<sup>80</sup> There is no such statutory scheme applicable here.

In any event, the approach followed in the statute and in the *DTV Order* itself starts with the proposition that a fee tied to the auction-model estimate of the value of the license is the logical means to use to recover the value of the license for the public. The Commission found it appropriate to examine other models, such as a percentage of revenue, only when it found that spectrum auctions of comparable spectrum did not exist and other variables were present that made an auction model difficult to approximate.<sup>81</sup> In the *DTV Order*, the FCC found it would be “difficult if not impossible” to determine the value based on the auction model because prior auctions of wireless spectrum were not comparable digital television spectrum for ancillary or supplemental use.<sup>82</sup> By contrast, an auction model is possible to construct here, because only last year the FCC completed the auctioning of AWS spectrum immediately adjacent to the 2155-2175 MHz band as part of Auction No. 66.<sup>83</sup>

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<sup>80</sup> The statute specifically required the Commission to adopt regulations enabling digital television licensees to provide ancillary and supplemental services. 47 U.S.C. § 336(a)(2). The statute also required the Commission to devise a fee that would apply only to the extent that a licensee charged a subscription fee for these services or was paid by a third party to transmit such services, but not to the extent the licensee provided such services without charge, supported by advertising. *Id.* § 336(e)(2).

<sup>81</sup> See *DTV Order*, 14 FCC Rcd at 3265 & n.29 (citing *Fees for Ancillary or Supplementary Use of Digital Television Spectrum Pursuant to Section 336(e)(1) of the Telecommunications Act of 1996*, 12 FCC Rcd 22821, 22827 (1997) (“*DTV NPRM*”).

<sup>82</sup> Even in the DTV case, where circumstances did not allow the use of an auction model, the use of an alternate gross revenues model was predicated on detailed microeconomic theory specific to DTV capacity and the receipt of comments and reply comments in a notice and comment rulemaking expressing “overwhelming support” for a gross revenues model – circumstances not present here. See *DTV Order*, 14 FCC Rcd at 3264-65; *DTV NPRM*, 12 FCC Rcd at 22827-89.

<sup>83</sup> See *Public Notice*, “Auction of Advanced Wireless Services Licenses Closes; Winning Bidders Announced for Auction No. 66,” DA 06-1882 (Sept. 20, 2006) (announcing that the auction of AWS licenses in the 1710-1755/2110-2155 MHz bands was completed on September 18, 2006). M2Z has stated that the wireless broadband service it seeks to provide at 2155-2175 MHz “is fully consistent with the AWS designation.” M2Z Application at 16 n.38; see also *id.* at

(footnote continued)

Together, the *Mtel*, *800 MHz Rebanding*, and *DTV* cases stand for the proposition that the FCC's authority to require payment for a spectrum license awarded outside the auction context must be premised on a payment reasonably related to the value of the license to the recipient – as determined where at all possible by comparison to recent sales of comparable spectrum at auction or in the secondary market. Where the payment does not bear such a relationship and is not otherwise related to the FCC's recovery of application or regulatory fees for services rendered by the agency to the regulatee,<sup>84</sup> it takes on the appearance of a tax which the FCC is without authority to levy.<sup>85</sup> The D.C. Circuit's statement on the assessment of a fee based on gross revenues, while issued prior to Section 309(j)'s directive to recover the value of a spectrum license (and thus focused on the recovery of fees for services rendered) is instructive:

While we do not hold that the Commission may under no circumstances assess a fee based on the number of subscribers, or on gross revenues, we interpret the mandate of the Supreme Court in [*National Cable*] to mean that the agency must in all cases demonstrate a 'necessary, natural, or . . . probable correspondence between the sums to be paid . . . and . . . the character or extent of the services [rendered] . . . .' [Here,] there is no way for us to verify that the fee is justified by the value conferred . . . .

. . . . The fee . . . should be reasonably related to the individual cost of services . . . so that the 'fee' does not become a 'tax'.<sup>86</sup>

Here, the M2Z fee is not reasonably related to the value of the spectrum it seeks to acquire. As noted above, it appears that the offering of premium services may be discretionary,<sup>87</sup>

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(footnote continued)

18 n.44 (acknowledging the "auctioning [of] 2110-2155 MHz immediately below spectrum M2Z proposes to use for its service").

<sup>84</sup> See 47 U.S.C. §§ 158, 159; see also *Electronic Industries Association et al. v. FCC*, 554 F.2d 1109, 1113-14 (D.C. Cir. 1976) (fees must reasonably reflect the cost of the services performed and value conferred upon the payor) (citing *National Cable*, 415 U.S. at 341-42).

<sup>85</sup> See *National Cable*, 415 U.S. at 340-44.

<sup>86</sup> *NCTA v. FCC*, 554 F.2d 1094, 1108 (D.C. Cir. 1976).

<sup>87</sup> See *supra* note 25 & accompanying text.

in which case no fee will be collected and no value of the spectrum resource recovered. Even if premium services are in fact offered, no attempt is made to quantify either the present value of the license or the amount of the fee to be collected, or to compare the two to establish a reasonable relationship. As important, the proposed fee based only on gross receipts from any premium subscription services M2Z may offer would not account for value to M2Z from the license for its primary basic broadband service offering, which will generate advertising revenues inuring to the benefit of M2Z. For all these reasons, the FCC lacks authority to collect the proposed fee in the first instance.

**III. ASSUMING FURTHER CONSIDERATION IS GIVEN THE PROPOSED SERVICE, THE COMMISSION SHOULD PROCEED BY RULEMAKING TO DECIDE THE SPECTRUM'S BEST USE**

For the reasons state above, the application cannot be granted. Nevertheless, assuming *arguendo* further consideration of the proposed service is warranted, the Commission should do so pursuant to a notice and comment rulemaking that considers all possible uses of the spectrum – not just a single proposed use to a single licensee – to determine its highest and best use. Such action is compelled by prior decisions in the AWS docket and established case law that matters of broad applicability – such as the spectrum policy matters at issue here – be considered in the context of a rulemaking. It is also necessary to ensure that all interested parties have a full and fair opportunity to comment on all potential uses of, and means to award, the spectrum at 2155-2175 MHz to determine its best use. Under these circumstances, the failure to proceed by rulemaking would constitute unreasoned decisionmaking.<sup>88</sup>

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<sup>88</sup> See 5 U.S.C. § 706(2)(A); *State Farm*, 463 U.S. at 43; *A.L. Pharma, Inc. v. Shalala*, 62 F.3d 1484, 1491 (D.C. Cir. 1995).

As an initial matter, the Commission has repeatedly stressed that it would consider how to assign AWS spectrum at 2155-2175 MHz “in a separate service rules proceeding,”<sup>89</sup> noting that “[t]he ultimate use of the band will be determined . . . by market forces operating within the framework of such rules.”<sup>90</sup> Action to award valuable spectrum to a private party outside of the rulemaking process, and in the absence of competing applications, is hardly consistent with the FCC’s past directive that market forces be allowed to determine the best use of the spectrum pursuant to rules adopted in the course of a rulemaking proceeding. While the proposal may have some laudable goals, it cannot be said that these goals are necessarily the highest and best use of the spectrum in the public interest without comparative consideration of all potential uses of the spectrum in a full notice and comment rulemaking.<sup>91</sup> If Commission determines that spectrum should be used in the manner proposed by M2Z, service rules could be adopted in a rulemaking and the spectrum put up for auction,<sup>92</sup> consistent with the prior AWS decisions. The *Public Notice* also does not even mention the prior AWS decisions to proceed by rulemaking,

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<sup>89</sup> *New Advanced Wireless Services, Ninth Report and Order and Order*, 21 FCC Rcd 4473, 4477 n.22 (2006) (“*AWS Ninth R&O*”) (“[W]e are not deciding here how to assign this new AWS spectrum at 2155-2175 MHz but will consider this issue in a separate service rules proceeding at a later date.”); *AWS Eighth R&O*, 20 FCC Rcd at 15872 (“[W]e do not decide here how to assign this new AWS spectrum at 2155-2175 MHz but will consider this issue in a separate service rules proceeding at a later date.”).

<sup>90</sup> *AWS Eighth R&O*, 20 FCC Rcd at App. B § D.

<sup>91</sup> One of the Commission’s key strategic goals is to “[e]ncourage the highest and best use of spectrum domestically and internationally in order to encourage the growth and rapid deployment of innovative and efficient communications technologies and services.” Federal Communications Commission, *Strategic Plan FY 2003-FY 2008*, at 5 (2002). Section 309(j) also includes a presumption that licenses should be assigned to those who place the highest value on the use of the spectrum, and that auctions will achieve this result. *See* H.R. Conf. Rep. No. 105-217, 143 Cong. Rec. H6173 (daily ed. July 29, 1997) (Congress added this provision “to ensure that scarce spectrum is put to its highest and best use”).

<sup>92</sup> Plainly, M2Z does not want this result. It does not want to compete for the right to the spectrum.

and therefore does not provide a reasoned basis for any change in course away from a rulemaking.<sup>93</sup>

Moreover, the Commission has recognized here that the application “implicates broadly applicable policy issues,”<sup>94</sup> and elsewhere has acknowledged that “guidance from the courts indicates that issues of general applicability are more suited to rulemaking than to adjudication.”<sup>95</sup> This is particularly the case in matters involving the best use of spectrum.<sup>96</sup> Discussion should not be artificially limited on an issue as important as the best use of spectrum to only one proposed use, particularly when that use would curtail the very public interest benefits (*e.g.*, 70 MHz of contiguous spectrum) found by the Commission when it reallocated the 2155-2175 MHz band to AWS use in the first instance. Accordingly, because the service proposed in the instant application has “far-reaching implications,” it should only be addressed – if at all – “in a rulemaking proceeding instead of in an adjudication . . . proceeding.”<sup>97</sup>

Nor does the current adjudicatory proceeding under Section 309(d) allow for all interested parties to participate. Unlike a rulemaking which is open to all parties, Section 309(d)(1) of the Act “only allows a ‘party in interest’ to protest an application before the

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<sup>93</sup> See *Greater Boston*, 444 F.2d at 852; *State Farm*, 463 U.S. at 41-44.

<sup>94</sup> *Public Notice* at 2.

<sup>95</sup> *Establishment of Rules and Policies for Local Multipoint Distribution Service and Fixed Satellite Services, Second Report and Order, Order on Reconsideration, and Fifth Notice of Proposed Rulemaking*, 12 FCC Rcd 12545, 12705 & n.599 (1997) (“*LMDS/FSS Second R&O*”); compare *Community Television of Southern California v. Gottfried*, 459 U.S. 498, 511 (1983) (“[R]ulemaking is generally a better, fairer, and more effective method of implementing a new industry wide policy than the uneven application of conditions in isolated [adjudicatory] proceedings.”); *National Small Shipment Traffic Conf. v. ICC*, 725 F.2d 1442, 1447-48 (D.C. Cir. 1984) (“Notice-and-comment procedures . . . are especially suited to determining . . . policy of general, prospective applicability.”) with *Pfaff v. Department of Housing & Urban Development*, 88 F.3d 739, 748 (9th Cir. 1996) (“Adjudication is best suited to incremental developments to the law, rather than great leaps forward.”).

<sup>96</sup> See *Nextel Communications, Inc.*, 14 FCC Rcd 11678, 11691-92 (WTB 1999) (declining to proceed through adjudication where spectrum policies of general applicability were at issue).

<sup>97</sup> See *id.* (citing *LMDS/FSS Second R&O*, 12 FCC Rcd at 12705).

Commission.”<sup>98</sup> The mere fact of this restriction may artificially reduce the participation of otherwise interested parties worried they cannot show standing to participate.

### CONCLUSION

For the foregoing reasons, the application of M2Z cannot be granted.

Respectfully submitted,

**AT&T INC.**

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*Its Attorneys*

March 2, 2007

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<sup>98</sup> *Commco Technology, LLC*, 17 FCC Rcd 5788, 5791 (PSPWD/WTB 2002) (citing 47 U.S.C. § 309(d)(1)); *Cel Tel Communications*, 16 FCC Rcd 16019, 16021 (CWD/WTB 2001); *Black Crow Wireless, LP*, 16 FCC Rcd 15643, 15644-45 (CWD/WTB 2001); *Northcoast Communications*, 16 FCC Rcd 15637, 15639-40 (CWD/WTB 2001)).

**ATTACHMENT A**

## DECLARATION OF DAVID SHIVELY, PhD

I, David Shively, hereby declare and state as follows:

I hold PhD, MS, and BS degrees in electrical engineering with specializations in wireless communications, electromagnetics, and antenna theory and design. I am also a Senior Member of the IEEE (Institute of Electrical and Electronics Engineers, Inc.) and have been an active participant in several industry standards bodies including 3GPP, ATIS WTSC, TIA TR45.5, and IEEE-802. I have been employed as a Lead Member of Technical Staff of AT&T Mobility, f/k/a Cingular Wireless LLC (“AT&T”) and BellSouth Cellular since 1999. I make this Declaration in support of AT&T’s Petition to Deny the application filed by M2Z Networks, Inc. for a 20 MHz license in the 2155-2175 MHz bands (“Petition”). I have reviewed the technical and factual assertions made in Section I.B of the Petition and they are accurate. In addition, I make the following statements.

M2Z claims that its proposal would not cause interference to other licensees, but fails to substantiate this claim. In fact, in the absence of specific service rules, it is impossible to substantiate this claim and at this point the FCC has not initiated a proceeding to develop service rules for the 2155-2175 MHz band.

M2Z proposes to deploy a Time Division Duplex (“TDD”) system. The Commission has correctly noted that such systems “generally require a guard band between their band of operation and adjacent bands to minimize the potential of harmful interference.”<sup>1</sup> M2Z’s proposal, however, does not include a guard band. Yet, its TDD system would be deployed directly adjacent to the 2110-2155 MHz AWS-1 Band, which will contain networks using Frequency Division Duplex (“FDD”) technology required by the FCC in the Part 27 service rules for AWS-1.<sup>2</sup> The operation of TDD and FDD systems in adjacent bands raises substantial interference concerns, especially in the absence of a necessary guard band.

The operation of a TDD system in the 2155-2175 MHz spectrum could cause significant interference issues for FDD systems in the AWS-1 band. These interference concerns are well known and were fully analyzed recently in a report commissioned on behalf of the United Kingdom’s Office of Communication.<sup>3</sup> Findings from this independent study include:

- “Interference between mobiles (FDD and TDD or TDD and TDD) was excessive in all scenarios modeled, for short propagation paths (10 metres or less);”

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<sup>1</sup> *Interim Report: Spectrum Study of the 2500-2690 MHz Band – The Potential for Accommodating Third Generation Mobile Systems* (Nov. 15, 2000).

<sup>2</sup> *See Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands*, 18 FCC Rcd 25162, 25024 (2003) (“[W]e determine that it is best not to permit base and mobile stations to operate in the same AWS bands — which effectively prevents TDD systems from operating in those bands”).

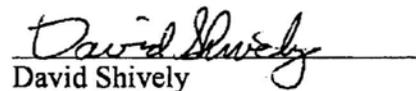
<sup>3</sup> *2500-2690 MHz, 2010-2025 MHz, and 2290-2302 MHz Spectrum Awards – Engineering Study (Phase 2)*, Mason Communications Ltd (Nov. 2006) (“Ofcom Study”).

- “[W]orst-case analysis demonstrated that FDD/TDD, and TDD/TDD, co-existence is not feasible” at a 5 MHz offset – *i.e.*, the equivalent of operating M2Z’s proposed network adjacent to an FDD system operating in the AWS-1 band;
- The worst-case interference mode is base station to base station, for which a separation distance of significantly greater than 1km was predicted to be required between base stations to avoid interference; and
- UMTS FDD base stations and WiMAX (*i.e.*, TDD) “fixed subscriber stations” require a separation distance of more than 1km.

These findings are fully applicable here and demonstrate that the operation of FDD and TDD networks in adjacent bands is not feasible without suitable interference mitigation techniques *and* guard bands. While M2Z’s proposal claims that its use of advanced antenna system technology and Orthogonal Frequency Division Multiple Access waveforms will “ensure that M2Z is a good neighbor,” its proposal fails to demonstrate how the techniques will eliminate the various interference scenarios. Even with appropriate interference mitigation, however, the Of-com study concluded that “FDD/TDD co-existence at 5 MHz offset (*i.e.*, operation in an adjacent channel) is not feasible for macro cellular deployment.”<sup>4</sup> In addition, while M2Z had included proposed conditions on its license in its filing, these conditions may not remove the risk of interference.

M2Z relies on the publication of a 2004 ITU Report – Rep. ITU-R M.2045 – to support its claim that the operation of TDD and FDD systems in adjacent bands is possible without harmful interference through the use of mitigation techniques. However, many of the techniques described in the ITU Report do not apply to mobile to mobile interference scenarios. In addition, some of the mitigation techniques are highly complex (and therefore require a large array of antenna elements, *i.e.*, more than 2 antennas as has been generally assumed in the case of WiMAX base stations) and could affect the design and deployment of the FDD system operating in the AWS-1 band, as this duplexing scheme has been mandated by the FCC. Furthermore, it is not apparent that any of these mitigations techniques would be mandated through regulation and, therefore, it is unknown if these capabilities would be widely deployed and would successfully remove interference in all cases. Therefore, I agree with the Commission that the operation of TDD and FDD systems in adjacent bands is not possible without guard bands.

I hereby declare under penalty of perjury that the foregoing is true and correct.

  
David Shively

Executed March 1, 2007

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<sup>4</sup> *Id.* at 7.

**CERTIFICATE OF SERVICE**

I, Sarah Dahlia Gutschow, hereby certify that a copy of the foregoing Petition to Deny has been served this 2<sup>nd</sup> day of March, 2007, by first class United States mail, postage prepaid, on the following:

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Sarah Dahlia Gutschow