

September 17, 2009

**Via Electronic Filing**

Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12th Street, S.W.  
Washington, DC 20554

Re: Written *Ex Parte* Presentation —  
Service Rules for Advanced Wireless Services  
in the 2155-2175 MHz Band (AWS-3)  
WT Docket Nos. 07-195, 04-356

Dear Ms. Dortch:

Ericsson Inc files this *ex parte* to respond to several recent filings in the AWS-3 proceeding by M2Z Networks.<sup>1</sup> This proceeding presents the Commission with an important opportunity to encourage innovation and investment in broadband infrastructure and services deployment by supporting global harmonization of the AWS-3 band, rather than earmarking this band to suit one particular proposal that will create a source of interference to adjacent bands.

The Commission has recognized in its recent “Fostering Innovation and Investment” Notice of Inquiry that innovative wireless services depend in large part on the availability of suitable spectrum for their development, and that the need for spectrum inexorably grows over time.<sup>2</sup> There is a critical need to make available spectrum that is well-suited to new and innovative uses, including by enhancing and complementing existing spectrum assignments and by not degrading them through harmful interference.<sup>3</sup> Moreover, it is important to account for

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<sup>1</sup> M2Z filed an *ex parte* notice on August 6 concerning its August 5 meeting with Austin Schlick, the General Counsel, another *ex parte* notice on August 6 concerning its August 5 meeting with David Goldman of the office of the Chairman, and an August 19 *ex parte* notice concerning its August 18 meeting with members of the Wireless Telecommunications Bureau staff.

<sup>2</sup> *Fostering Innovation and Investment in the Wireless Communications Market; A National Broadband Plan For Our Future*, GN Docket 09-157 & GN Docket 09-51, *Notice of Inquiry*, FCC 09-66, ¶ 20 (Aug. 27, 2009).

<sup>3</sup> *Id.* at ¶¶ 25-26.

international usage when deciding how spectrum can best be used.<sup>4</sup> Accordingly, global harmonization of spectrum usage also must play an important role.

The AWS-3 band is unpaired spectrum that can be used productively to provide advanced services through asymmetrically pairing it with the adjacent AWS-1 band to make possible greater downstream capacity for broadband services. The use of this band for downstream transmissions would be consistent with international usage as envisioned by the ITU, with U.S. support and encouragement,<sup>5</sup> and will encourage the development of innovative equipment and services for this band that will benefit U.S. consumers. Further, there has been continued standards work in the Third Generation Partnership Project (“3GPP”) that would harness the advantages of asymmetrical pairing by pooling network resources targeted initially to the downlink traffic, such as Dual Cell High Speed Downlink Packet Access (“DC-HSDPA”), providing consumers with a greatly enhanced wireless broadband experience.<sup>6</sup> The propagation characteristics of the band, its location, and equipment availability all provide significant opportunities for broadband investment and services.

However, M2Z’s proposal would directly undermine such investment and services development. M2Z seeks instead to use this spectrum for both up- and downstream transmissions using time division duplexing (“TDD”) technology. Two way operation in this band would be at odds with the way this spectrum has been identified by standards bodies and is being used elsewhere. Given that the U.S. would be a niche market with M2Z’s unique bandplan, and the equipment used elsewhere in the world would not be compatible with M2Z’s planned use of the spectrum, there has been little support from the supplier community for the M2Z proposal, and therefore it is expected that there will be little innovation in the equipment and services marketplace.

Moreover, M2Z’s proposed two-way use of this spectrum poses significant interference issues that cannot be fully resolved; even inefficient usage of a considerable portion of the band as a guard band may not protect AWS-1 users from encountering harmful interference. And the need to protect AWS-1 from harmful interference will also create considerable uncertainty in the marketplace that will negatively affect the development and availability of efficient and innovative equipment and services in the AWS-3 band.

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<sup>4</sup> *Id.* at ¶ 25 & n.13.

<sup>5</sup> Starting in 1992, the international community, with participation from the FCC and other federal agencies, developed and supported a 3G bandplan and specifications that would be globally recognized. As a result, the 2110–2170 MHz band has been identified internationally as a downlink band for 3G use; in addition, CITELE, the main forum in the Americas (Region 2) for coordination of regional policy has also endorsed the pairing of this band as a downlink band with the 1710–1770 MHz uplink band. See XXI Meeting of Permanent Consultative Committee III: Radiocommunications, CITELE, *Final Report*, OEA/Ser.I/XVII 4.3, PCC.3/doc. 2371/02 rev.2, at 21 (July 25, 2002) (Option 5, “Mobile transmit band 1 710–1 770 MHz, paired with the global base transmit band 2 110–2 170 MHz, consistent with a duplex separation of 400 MHz.”), available at <[http://www.citel.oas.org/pcc3\\_old/final/P3-2371r2\\_i.doc](http://www.citel.oas.org/pcc3_old/final/P3-2371r2_i.doc)>.

<sup>6</sup> See 3GPP TR 25.825 (V1.0.0) “Dual Cell HSDPA Operation,” available at <<http://www.3gpp.org/ftp/Specs/html-info/25825.htm>>; 3GPP Technical Steering Group (TSG) Radio Access Network (RAN) #40, *Proposed way forward for Dual-Cell HSDPA Operation*, RP-080467, available at <[http://www.3gpp.org/ftp/tsg\\_ran/TSG\\_RAN/TSGR\\_40/docs/RP-080467.ZIP](http://www.3gpp.org/ftp/tsg_ran/TSG_RAN/TSGR_40/docs/RP-080467.ZIP)>; E. Seidel *et al.*, *White Paper—Dual Cell HSDPA and its Future Evolution* (Nomor Research GmbH Jan. 2009), available at <[http://www.nomor.de/uploads/1h/pA/1hpAccByjinAOWBDzTNt4w/WhitePaper\\_DC-HSDPA\\_2009-01.pdf](http://www.nomor.de/uploads/1h/pA/1hpAccByjinAOWBDzTNt4w/WhitePaper_DC-HSDPA_2009-01.pdf)>.

The bottom line is that allocation of the AWS-3 spectrum tailored to a single company's vision or business plan without due consideration for the larger picture will not allow market forces to create the most significant opportunities for investment and innovation. M2Z's proposed two-way use of this band simply is not supported by technical requirements or an existing or foreseeable "ecosystem" of base station and subscriber equipment. And without a sustainable ecosystem, it is highly doubtful that a business plan based on two-way operation in the AWS-3 band can ever be realized.

Ericsson urges the Commission to reject the M2Z proposal set forth in the *Further Notice*.<sup>7</sup> The bandplan and rules ultimately adopted should be based on rigorous technical analysis of valid data, not M2Z's repeated claims.<sup>8</sup> Innovation and investment — and widespread use of this spectrum for broadband access — will be furthered if the spectrum is auctioned for asymmetric pairing with AWS-1 spectrum.

Pursuant to the Commission's rules, a copy of this notice is being filed electronically in the above-captioned dockets.

Respectfully submitted,

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<sup>7</sup> *Service Rules for Advanced Wireless Services in the 2155–2175 MHz Band; Service Rules for Advanced Wireless Services in the 1915–1920 MHz, 1995–2000 MHz, 2020–2025 MHz and 2175–2180 MHz Bands*, WT Dockets 07–195 & 04–356, *Further Notice of Proposed Rulemaking*, 23 F.C.C.R. 9859 (2008).

<sup>8</sup> For example, Ericsson has previously pointed out that M2Z's purported interference analysis is predicated on AWS-1 handsets being evenly distributed, which is highly unrealistic. An assumption that handsets are evenly spaced apart will lead to a false conclusion that there is little likelihood of interference, due to the fact that the handsets are widely separated; whereas a recognition that people with handsets congregate around tables and in crowds instead leads to the correct premise — that handsets will often be close together and thus susceptible to interference. See Ericsson *Ex Parte* Letter dated September 9, 2008, at 3 ("Further, test results are not necessarily more reliable simply because statistical methods are used. The output is entirely dependent on the accuracy of the input parameters. . . . Terminals were assumed to have been homogeneously distributed over the entire simulated area for the test. However, this assumption obviously does not reflect a realistic scenario; it is well known that users of mobile devices tend to congregate in particular areas resulting in higher concentrations of user densities.").