Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of	)	
	)	
Service Rules for Advanced Wireless Services in the 2155–2175 MHz Band	)	WT Docket No. 07–195
	)	
	)	
Service Rules for Advanced Wireless Services in the 1915–1920 MHz, 1995–2000 MHz, 2020–2025 MHz and 2175–2180 MHz Bands	)	WT Docket No. 04–356

To: The Commission

COMMENTS OF ERICSSON INC AND
SONY ERICSSON MOBILE COMMUNICATIONS (USA) INC.

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TABLE OF CONTENTS

Summary ii

I. Introduction 1

II. Issues Relating to the 2155–2180 MHz Band 3

A. Two-Way Operations in the AWS–3 Spectrum Put AWS–1 Operations at Risk 3

B. Two-Way Operations in AWS–3 Threaten Successful Global Harmonization Efforts and Will Forego the Benefits of Global Standardization 7

C. Regional Licenses for Downlink-Only Usage of the AWS-3 Band that Permit Asymmetric Pairing with Other CMRS Spectrum Enables More Efficient Use of the Spectrum 10

III. Issues Relating to the H Block (1915–1920 & 1995–2000 MHz) 12

Conclusion 13

SUMMARY

Ericsson Inc ("Ericsson") and Sony Ericsson Mobile Communications (USA) Inc. ("SEMC") do not support the proposal to allow both uplink and downlink transmissions in the AWS–3 band. In prior filings on this subject, in response to the *AWS−3 NPRM*, Ericsson and others demonstrated the existence of significant technical obstacles to uplink operations in the AWS–3 spectrum, due to harmful mobile-to-mobile interference to AWS–1 operations.[1] In the instant *Further Notice*, the Commission does not address, or even acknowledge, these technical issues raised by commenters. As a result, the proposal for uplink operations in the AWS–3 spectrum is as ill-advised today as it was six months ago. The following are Ericsson's and SEMC's key comments on the *Further Notice*:

- Two-way operations in the AWS-3 band would create interference to the AWS-1 band, thereby degrading the value and delaying the use of AWS–1 spectrum. The proposed service rules do not adequately resolve unacceptable loss of AWS-1 receiver sensitivity or compromised AWS-1 network capacity and coverage;
- Neither additional front-end filtering nor proposed out of band emissions restrictions fully address the substantial harm that AWS-3 mobile transmissions would have on adjacent AWS-1 operations;
- Equipment that can operate in the AWS-1 band already exists and would have to be modified which would delay implementation in the AWS-1 band by an estimated 12-18 months;
- Designating the AWS-3 band as an AWS-1 extension band would harmonize this spectrum globally; an AWS-3 band that is globally harmonized would enable economies of scale that reduce handset costs, improve the availability of devices, and facilitate more efficient global roaming;
- The Commission should allocate the AWS-3 band for downlink only transmissions, permit it to be asymmetrically paired with AWS-1, and auction it on an unencumbered Regional basis. This would enable a diversity of licensees to expand their networks and to provide the advanced services that demand additional downlink capacity;

[1] *See* Ericsson AWS–3 Reply Comments, WT Docket 07–195, at 2–7 (filed Jan. 14, 2008); *see also, e.g.,* Verizon Wireless AWS−3 Comments; T–Mobile USA, Inc. AWS−3 Comments; Motorola, Inc. AWS−3 Comments; CTIA–The Wireless Association AWS−3 Comments (all of the foregoing AWS–3 Comments were filed December 14, 2007, in WT Docket 07–195).

- Ericsson and SEMC support the adoption of the current industry standards for OOBE in the H block, specifically –66 dBm/MHz; and
- Existing handsets operating in the PCS downlink (mobile receive) should be protected from H block interference. Applying more restrictive OOBE levels to all PCS handsets would be unnecessarily disruptive to both manufacturers and consumers, and would raise costs and decrease battery life across manufacturers' entire product lines.

For the foregoing reasons, Ericsson and SEMC urge the Commission to: 1) allocate the AWS-3 band for downlink only transmissions; 2) permit the AWS-3 band to be asymmetrically paired with AWS-1 spectrum; 3) auction the AWS-3 band on an unencumbered Regional basis; and 4) adopt OOBE limits for the H Block consistent with the proposals of the wireless industry. Such actions are in the public interest and will lead to the highest and best use of our limited spectrum resources.

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Ericsson Inc ("Ericsson") and Sony Ericsson Mobile Communications (USA) Inc. ("SEMC") hereby submit comments in response to the Commission's *Further Notice of Proposed Rulemaking*.[2] As discussed below, Ericsson and SEMC do not support the proposal to allow both uplink and downlink transmissions in the AWS–3 band, due to the significant technical challenges associated with the proposal and given the potential for harmful interference with the AWS–1 band.

I. INTRODUCTION

In the *Further Notice* the Commission proposes to combine the AWS–2 spectrum at 2175–2180 MHz with the AWS–3 spectrum at 2155–2175 MHz, thus creating a contiguous 25 MHz block of spectrum. Under the proposal, Time Division Duplexing ("TDD") would be

[2] *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*, FCC 08-158 (June 20, 2008) (*Further Notice*), *summarized*, 73 Fed. Reg. 35995 (June 25, 2008).

authorized in this band to enable both uplink and downlink, under a business model that would require the licensee to devote 25% of its capacity to free broadband wireless Internet access. The Commission does not propose any disposition for the AWS–2 spectrum at 2020–2025 MHz, which was previously to have been paired with the 2175–2180 MHz band. Despite promising increased broadband wireless access, this proposal would, in actuality, imperil important wireless broadband access initiatives already under way and undermine the utility and value of the AWS–3 spectrum.

With its AWS–1 allocation, the Commission's primary goal was to make spectrum available for the provision of advanced wireless services, including 3G broadband Internet access.[3] As part of this goal, the Commission was particularly interested in creating a vehicle for bringing wireless broadband service into rural areas.[4] Industry was clearly committed to this goal as evidenced by the indisputable success of Auction 66, wherein the Commission raised (in net bids) a total of $13.7 billion for the AWS-1 spectrum.[5] There has been significant progress on achieving the Commission's primary AWS-1 allocation goal to date; vendors are supplying equipment and licensees are building out networks across the country.[6] The *Further Notice* proposal seriously threatens to derail this progress.

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[3] *See, e.g.*, *Service Rules for Advanced Wireless Services In the 1.7 GHz and 2.1 GHz Bands*, WT Docket 02–353, *Order on Reconsideration*, 20 F.C.C.R. 14058, ¶ 2 (2005).

[4] *See id.* at ¶¶ 10–18.

[5] FCC, Auction 66 Summary, *available at* <http://wireless.fcc.gov/auctions/default.htm?job=auction_summary&id=66>.

[6] *See* Matt Kapco, *T–Mobile USA goes 3G in NYC*, RCR News (May 5, 2008), *available at* <http://www.rcrnews.com/apps/pbcs.dll/article?AID=/20080505/FREE/88809483> (describing the launch of T–Mobile's 3G network using AWS–1 spectrum).

II. ISSUES RELATING TO THE 2155–2180 MHZ BAND

In the *Further Notice*, the Commission proposes to allow two-way transmissions in the AWS–3 band. Such operations endanger adjacent AWS–1 licensees and could seriously disrupt service. There is no simple "fix" that would resolve the negative impacts to AWS-1 operations of two-way transmissions in the AWS-3 band. As a result, two-way operations in the AWS-3 band would degrade the value and delay the use of AWS–1 spectrum and eliminate important opportunities for achieving equipment economies of scale. Accordingly, the FCC should not allow two-way transmissions in the AWS-3 band. Instead, the Commission should increase the opportunities for global harmonization and the efficient use of spectrum such as by auctioning unencumbered Regional licenses for the AWS-3 band that allow for downlink only use of the band and permit asymmetric pairing with AWS-1.

A. Two-Way Operations in the AWS–3 Spectrum Put AWS–1 Operations at Risk

In the *AWS−3 NPRM*, the Commission acknowledged that TDD operations in the AWS−3 band could pose a significant interference threat to AWS−1 receivers.[7] Indeed, interference to AWS-1 licensees is a significant issue. This is because the proposed two-way operation in the AWS–3 band permits uplink transmissions that would directly affect mobile terminals receiving base station transmissions in the AWS–1 downlink band. Neither changes to the passband filters nor the proposed out of band emissions ("OOBE") can effectively mitigate this interference.

[7] *See Service Rules for Advanced Wireless Services in the 2155–2175 MHz Band*, WT Docket 07–195, *Notice of Proposed Rulemaking*, 22 F.C.C.R. 17035, ¶¶ 16, 19, 60 (2007) ("*AWS–3 NPRM*").

First, M2Z, the chief proponent of two-way communications in the AWS-3 band, claims that the interference from AWS-3 terminals could be mitigated by using passband filters that end at 2155 MHz in AWS-1 receivers. Such claims are ill-informed and simply ignore the practical limits of filter technology. Technical analysis leads to a different conclusion.

SEMC asked one of its SAW duplexer vendors to analyze the impact on passband loss, assuming increases in stopband attenuation of 10dB and 20 dB at frequency 2170 MHz. (Current duplexers have 2.2 dB attenuation at 2170 MHz.) According to the filter supplier, the increase in passband loss using the10dB stopband assumption would be 0.6dB typical/1.8dB maximum. For 20dB stopband assumption, the increase in passband loss would be 1.6dB typical/7.5 maximum. These increases in passband loss are rather large and occur while only achieving *moderate* increases in stopband attenuation 15 MHz into the proposed AWS-3 band. For instance, the added attenuation in the region from 2155 to 2165 would likely only be 1- 3 dB.

Based on the foregoing analysis, the additional front-end filtering proposed by M2Z to protect AWS-1 receivers from AWS-3 signals would only occur for signals above 2170 MHz. And, the resulting increase in the passband loss for *all* terminals would cause a loss of capacity / coverage for the entire AWS-1 system. Thus, the contention that passband filters ending at 2155 MHz could effectively combat interference from AWS–3 operations is unsupported by technical analysis. On the contrary, AWS–1 Operators would be required to develop and use specialized handsets to address interference assuming, *arguendo*, that such interference-mitigating handsets are even feasible.

Second, the proposed OOBE for the AWS-3 band will not resolve interference problems. Interference to AWS–1 from an AWS−3 device in close (1 m) proximity[8] is predominantly the result of: 1) "jamming" or desensitization of the AWS–1 handset's downlink receiver by uplink transmissions from the AWS–3 device; and 2) OOBE from the AWS–3 device within the AWS–1 band.[9] The proposed OOBE of 60+10log(P)/MHz will not effectively mitigate the interference to AWS-1.

An AWS-1 receiver is required to have a Noise Figure of 9dB or lower[10] and typically has a 6.5 dB Noise Figure. An OOBE of 60+10log(P)/MHz would result in an EIRP level of -24dBm directly into a WCDMA receiver in the AWS-1 band with a bandwidth of 4.4 MHz. At 1 meter (an attenuation of 39 dB) and with 50% antenna efficiency (SAM-R), the interference level into the receiver channel would be -66 dBm. Thus, the typical AWS-1 receiver will have a noise floor of -103 dBm. Interference in the -66 dBm range would cause a desensitization of approximately 37 dB in the AWS-1 receiver. This is a significant (unacceptable) loss of receiver sensitivity.

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[8] A 1 m distance is typically used for characterizing mobile-to-mobile interference. The Third Generation Partnership ("3GPP") organization does much analysis of interference in the course of its standards setting procedures. These standards are used under all the major regulatory jurisdictions of the world (ETSI, FCC, MITI, etc.). 3GPP Technical Report 25.942, version 7.0.0, is a document that spells out conditions for doing analyses of 3G mobile communications systems. Specifically, section 4.2 deals with Mobile Station to Mobile Station situations. For analyzing interference and intermodulation, sections 4.2.1 and 4.2.2, subsections (d) in each, specify that the terminal to terminal distance to be used is 1 meter for terminals indoors and 5 meters for terminals outdoors. Subsection (e) in 4.2.1 even includes the specific case of MS TDD to MS FDD interference. Thus, the appropriate level of interference from an AWS–3 TDD Mobile Station (MS) to an AWS–1 FDD MS should be calculated using a 1 meter distance between the two Mobile Stations.

[9] *See* Ericsson AWS–3 Reply Comments at 5–6 (discussing effects of AWS–3 uplink signals on AWS–1 handset).

[10] 3GPP 25.101 version 7.0.0.

Desensitization also occurs because the AWS–3 spectrum falls within the frequency range where the AWS-1 filters are still responsive to signals. This is because there is a finite transition frequency band between receiver passband and stopband where full attenuation is achieved in the AWS–1 receiver. The proposed level of +23dBm/MHz EIRP will be excessive for AWS-3 terminals close to AWS-1 terminals. A full spectrum (25 MHz wide) AWS-3 terminal signal would radiate at +37dBm. With the current front-end filtering, at 1 meter separation, this would be approximately -5 dBm into an AWS-1 terminal. This level of signal would cause an overload into nonlinear operation and not merely a dB for dB desensitization.

Consequently, TDD operations in the AWS–3 band are inimical to the Commission's "good neighbor" policy, a policy that emphasizes the need to "group technically compatible systems and devices in close spectrum proximity," because "incompatibility can require additional constraints in the form of guard bands, consuming valuable spectrum, or expensive filtering systems to avoid adjacent band interference."[11] If the Commission were to adopt the *Further Notice* proposal, it would group together *incompatible* uses, resulting in not only an increase in potentially harmful interference but also an inefficient use of spectrum. Such incompatible uses should be avoided, given the difficulty of addressing the problems they cause after the fact.[12]

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[11] Spectrum Policy Task Force, ET Docket 02–135, *Report*, at 22 (Nov. 2002), *available at* <http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-228542A1.pdf>.

[12] The 800 MHz rebanding process illustrates the complexity of addressing widespread interference due to incompatible uses of spectrum after the fact. By avoiding incompatible uses and by adopting effective measures for the *prevention* of interference at the outset, the Commission can render such processes unnecessary.

B. Two-Way Operations in AWS–3 Threaten Successful Global Harmonization Efforts and Will Forego the Benefits of Global Standardization

Global harmonization and global standardization are the cornerstones of accessible telecommunications. Global harmonization and global standardization support the economies of scale that make equipment and services accessible to and affordable for a wide range of consumers. Two-way operations in the AWS-3 band would undermine both of these important objectives to the detriment of American consumers.

Globally, the 2110–2170 MHz band has been identified as a downlink band for 3G use. CITEL, 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.[13] For more than a decade, the United States participated in the international efforts to establish this 3G global bandplan[14] as well as globally harmonized standards for 3G. The handsets currently used for AWS–1 are designed and manufactured in accordance with these internationally harmonized standards.

The Commission should seek to maximize the opportunities for global harmonization and global standardization rather than to frustrate such efforts as proposed in the *Further Notice*. For example, using the 2155-2180 MHz band as an AWS-1 extension band would more closely align this spectrum with the globally standardized downlink (mobile receive) band of 2110-2170

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[13] *See* XXI Meeting of Permanent Consultative Committee III: Radiocommunications, CITEL, *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>.

[14] 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. This globally harmonized bandplan and specifications will be a major contribution to bridging the digital divide.

MHz. Since the AWS-3 and the global downlink band are sufficiently closely aligned, manufacturers of handset components for this common receive band could implement very minor hardware and software changes and thereby achieve economies of scale.[15]

Further, by using the 2155-2180 MHz band as an AWS-1 extension band the Commission could ensure that American consumers enjoy the competitive benefits associated with globally standardized products rather than the added expense of niche products that the *Further Notice* proposal essentially guarantees. For example, to fully utilize AWS–1 under the proposed new conditions, manufacturers would need to develop new filters and handsets that are more resistant to interference by AWS–3, to the extent this is even feasible. Yet, adding another band (including both mobile receiver and mobile transmitter) to the combination of bands supported by a handset model at this stage is a very difficult task for mobile phone vendors, especially for world wide suppliers like SEMC.

SEMC must already make tough choices about which band combinations it can support in each of its handset models. Because of the large number of mobile phone bands in the world, a vendor must strike a delicate balance between the number of phone variants it can produce (vendors seek to minimize this number to lower development, production, and inventory costs) and the number of bands in each phone variant (venders seek to minimize this number to lessen circuit and feature complexities and to lower cost). This balancing act supports the availability and affordability of a multiplicity of device choices for consumers.

Adding another band to the already large number of bands, particularly for the US market, is neither desirable nor an economically wise decision. A simple expansion of the

[15] Existing duplexers for the 2110-2170 MHz global downlink band already exhibit very little attenuation at 2180 MHz and thus could be easily modified to include this extra 10 MHz into a combined global downlink band.

bandwidth of the current AWS-1 band by the available spectrum is preferable. In this instance, accommodating expanded bandwidth requires no additional hardware in a handset model already supporting the AWS-1 band. In addition, terminal vendors could support such an expansion using duplexers with a receiver filter that are already made in large quantities for Regions 1 and 3. Further, a simple expansion of bandwidth means that no specialized band combinations for terminals for the US market are required. All of these factors combine to keep the terminal cost as low as possible.

The *Further Notice* also proposes operational conditions that offer dubious advantages. For example, if the duplexer in AWS–1 handsets were designed with a passband ending at 2155 MHz instead of 2170 MHz[16], there would be only a slight attenuation of the signals immediately above 2155 MHz as noted previously. This is because duplexers and filters suitable for incorporation into handsets and other portable terminals roll off gently, rather than cutting off sharply, beyond the passband. There would also be greater attenuation of signals within the new passband (*i.e.*, at frequencies below 2155 MHz), which would reduce handset sensitivity. Higher base station transmitter power is needed to counter reduced handset sensitivity, which, in turn, diminishes the overall coverage and capacity of a base station. Consequently, design changes to accommodate two-way transmissions in the AWS-3 band could lead to undesirable compromises in network efficiency and functionality.

Furthermore, if such handsets were feasible, and the AWS–3 rules were premised on the development and use of such handsets, Carriers would be required to decommission existing devices and replace them with new handsets. The entire embedded base of AWS–1 devices,

[16] It takes a significant amount of time to produce commercial products, including time for engineering, RF module redesign, verification, *etc.* To prepare prototypes for commercial release entails validation testing, type certification, and other activities, all of which are generally estimated to require a 12–18 month process.

including those now in use and those placed in use over the next few years, would need to be replaced to avoid the concerns raised herein. Such actions directly and negatively affect the cost of service and hinder the deployment and availability of service.

Specific product advantages are not the only benefit of global harmonization and global standardization. A common world-wide downlink band would also facilitate global roaming. A common downlink would enable industry to deploy more efficient scanning algorithms when searching for mobile networks. In contrast, the FCC proposal for two-way communications in the AWS-3 band could result in increasing the cost of providing service for AWS–1 Operators and frustrate global roaming, which is not in the public interest. Thus, aligning the AWS-3 and global downlink bands is in the public interest because it enables manufacturers to introduce more efficient and less expensive devices that facilitate international roaming and operation.

C. Regional Licenses for Downlink-Only Usage of the AWS-3 Band that Permit Asymmetric Pairing with Other CMRS Spectrum Enables More Efficient Use of the Spectrum

If the Commission proceeds as proposed, it will not only ensure an inefficient use of the AWS–3 spectrum but also cause the spectrum to be undervalued at auction. A more efficient and technically rational use of the AWS−3 band would be to allow for downlink-only transmissions in the band and asymmetric pairing with existing AWS-1 uplink spectrum. As Ericsson previously proposed in its reply comments to the *AWS−3 NPRM,* the Commission could easily achieve this result by auctioning 5 MHz blocks of spectrum, which are compatible with a wide variety of air interfaces and could be paired as additional downlink spectrum with a licensee's AWS-1 uplink spectrum.[17] Moreover, by creating Regional licenses, the Commission

[17] *See* Ericsson AWS−3 Reply Comments at 10.

would ensure that additional spectrum resources are available to a more diverse set of licensees. This licensing approach would increase the value and utility of the AWS-3 band.

To date, consumer use of spectrum is still largely asymmetric and more heavily concentrated in the downlink direction. For example, many more consumers download videos or photos to view than upload them. Although evolving standards have continually improved radio network throughput, such as by employing Multiple Input Multiple Output ("MIMO") technology and higher order modulation techniques, downlink capacity is still needed. Such capacity is particularly important to consumers' ability to access broadband services, like Internet browsing. By employing asymmetrical pairing, a larger downlink can be paired with a smaller uplink so that the spectrum allocation more closely matches network demands.

Asymmetric pairing also allows for a more dynamic network and improved user experience. For example, it enables the deployment of additional network resources, such as a second HSPA carrier, which creates an opportunity for network resource pooling — targeted to the downlink traffic — as a way to enhance the user experience.[18] This can also increase network speed and responsiveness in areas at the edge of a cell's coverage, where the performance of a symmetrical network is more constrained. Alternatively, certain spectrum, such as the AWS–3 band, could be dedicated to carrying particular forms of high-bandwidth traffic, such as video services. AWS-3 spectrum could also be used to increase the overall downlink bandwidth available for 3G broadband voice and data services. Thus, asymmetric pairing can allow carriers to improve service to consumers in a variety of different and efficient ways.

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[18] For example, Dual Cell HSDPA ("DC–HSDPA") is a technology that is currently being standardized in 3GPP based on asymmetrical pairing. Work items in 3GPP are already started to support standardization for dual carrier downlink in 3GPP systems. See http://www.3gpp.org/ftp/Specs/html-info/TDocExMtg--RP-40--25890.htm

Allowing asymmetric pairing is not the only consideration. The Commission must ensure that the spectrum is licensed appropriately. The Commission has used a wide variety of geographic license areas for other CMRS bands, including cellular, PCS, AWS−1, and 700 MHz. Ericsson and SEMC believe that it would be a mistake to license the AWS−3 band on a national basis. Instead, it should be offered on a Regional basis.

Regional licensing would allow the spectrum to be more closely matched to a variety of AWS-1 licensees' operations and would open the spectrum to a larger pool of potential licensees, including operators of small networks seeking to provide broadband wireless service to rural areas. Likewise, partitioning (and to a lesser extent, disaggregation) and spectrum leasing allows the geographical subdivision of this spectrum to be tailored to the needs of the marketplace. Under this approach, different channels could be used by a wide variety of licensees in CMAs, BTAs, MTAs, REAGs, EAs, or other areas varying from one to another part of the United States. For these reasons, Ericsson and SEMC recommend Regional licensing of the AWS-3 band.

III. ISSUES RELATING TO THE H BLOCK (1915–1920 & 1995–2000 MHZ)

Mobile transmissions in the H block (1915–1920 MHz band) have the potential to cause significant harmful interference to the millions of existing handsets operating in the PCS downlink (mobile receive) band at 1930–1990 MHz.[19] Based on testing and analysis by the wireless industry, Ericsson and SEMC support the adoption of the current industry standards for

[19] CTIA's original H Block comments included extensive test results, analyses, and reports concerning the interference potential of uplink transmissions in the 1915–1920 MHz band. *See* Comments of CTIA–The Wireless Association, WT Dockets 04–356 & 02–353 (Dec. 8, 2004), Att. A, <http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6516884746>, Att. B, <http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6516884747>, <http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6516884748>, Att. C. <http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6516884749>, <http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6516884750>.

OOBE, specifically –66 dBm/MHz. These industry standard limits have successfully prevented significant interference between GSM-based technologies and CDMA devices in the PCS bands since their adoption. The industry standard limits should be similarly applied to the H Block.

If the Commission nevertheless opts to impose more restrictive OOBE levels than those proposed by the wireless industry, any such heightened restrictions should *only* apply to the H block, and not to all bands that contain PCS or AWS services. Applying more restrictive OOBE levels to all PCS handsets under the rubric of consistency would be unnecessarily disruptive to both manufacturers and consumers, and would not result in greater interference prevention. On the contrary, elevating OOBE standards would only raise costs and decrease battery life across manufacturers' entire product lines. Further, establishing OOBE levels that are more restrictive than necessary to prevent significant interference undermine the Commission's goal of encouraging users to bring spectrum to its most efficient uses. Accordingly, Ericsson and SEMC urge the Commission to adopt the current industry standard of –66 dBm/MHz for OOBE.

CONCLUSION

For the foregoing reasons, Ericsson and SEMC urge the Commission to auction the spectrum unencumbered and to not authorize the use of mobile transmission in the AWS−3 band

and to adopt OOBE limits for the H Block consistent with the proposals of the wireless industry.

Respectfully submitted,

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