

May 26, 2006

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

Re: *Comments of the Wireless Communications Association International, Inc.
on Documents WAC/101 and WAC/102 – IB Docket No. 04-286*

Dear Ms. Dortch:

I am writing on behalf of the Wireless Communications Association International, Inc. (“WCA”) in response to the Commission’s May 1, 2006 *Public Notice* soliciting comment on, among other things, proposed United States positions regarding Agenda Item 1.9 of the 2007 World Radiocommunication Conference (“WRC-07”).¹ WCA urges the United States Government to address Agenda Item 1.9 in a manner that protects the United States wireless broadband industry operating in the 2500-2690 MHz (“2.5 GHz”) band against interference from the Mobile Satellite Service (“MSS”) to the maximum extent possible. To advance that objective, the United States Government should adopt the positions expressed in Documents WAC/101 and WAC/102A.

Within the United States, the 2500-2690 MHz band is allocated on a virtually exclusive basis² to the Broadband Radio Service (“BRS”) and the Educational Broadband Service (“EBS”) for terrestrial fixed and mobile services.³ Although BRS and EBS are flexible use services, clearly the Commission anticipates that the 2500-2690 MHz band will play an essential role in

¹ See *FCC Seeks Comment On Recommendations Approved By The Advisory Committee For The 2007 World Radiocommunication Conference*, Public Notice, DA 06-960 (rel. May 1, 2006).

² The United States Table of Allocations provides for use of the 2655-2690 MHz band for earth exploration satellite (passive), radio astronomy and space research (passive). Because of the nature of these services, they do not pose any interference threat to terrestrial operations.

³ Prior to the January 10, 2005 effective date of the Commission’s June 2004 *Report and Order* in WT Docket No. 03-66, BRS and EBS were known as the Multipoint Distribution Service and the Instructional Television Fixed Service, respectively. For simplicity’s sake, the services will be referred to as BRS and EBS throughout these comments.

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meeting the Nation's need for broadband services. BRS and EBS are seen by the Commission not only as a viable alternative to wired cable modem and digital subscriber line, but as an effective mechanism for providing broadband service to areas of rural America that wired services cannot economically serve. The Commission's aspirations for the 2500-2690 MHz band, however, may be dashed if interference from satellite services is permitted to pollute the band.

WCA's interest in Agenda Item 1.9 is long-standing. As the trade association of the wireless broadband industry and the leading domestic advocate for the use of the 2.5 GHz band for terrestrial broadband services,⁴ WCA has actively participated in the United States' efforts to develop positions in advance of WRC-07. Most importantly, WCA has participated fully in Informal Working Group 3 ("IWG-3"), which has been tasked with developing recommended positions for the United States regarding Agenda Item 1.9. WCA's objective has been simple – to assure that the United States' extensive efforts to promote the use of the 2.5 GHz band for wireless broadband services are not undermined by interference from satellite systems licensed by other countries.

The United States is not unfamiliar with the issues raised by Agenda Item 1.9 and the difficulties associated with efforts to share the same spectrum between terrestrial services and satellite services serving the same geographic area. For example, in 2003 the Commission eliminated the unused Fixed Satellite Service ("FSS") and Broadcast Satellite (Sound) Service ("BSS") allocations in the 2500-2690 MHz band,⁵ and earlier this month it affirmed that decision on reconsideration.⁶ In so doing, the Commission made the determination "that deleting the BSS/FSS allocation would serve the public interest by preventing the potential disruption of EBS and BRS across the country, as well as by avoiding imposing high costs on terrestrial licensees to mitigate harmful interference from BSS and FSS services to terrestrial services."⁷

Moreover, the record before the Commission is clear that the problems associated with sharing between the MSS and ubiquitous portable and mobile terrestrial systems (such as those

⁴ WCA has long been an advocate for the use of the 2.5 GHz band for the distribution of wireless broadband service, and in WT Docket No. 03-66 the Commission has radically altered the rules governing that band in response to a white paper submitted by WCA and representatives of educational licensees. WCA's membership includes, among others, virtually all of the companies that are, or in response to the new rules adopted in WT Docket No. 03-66 soon will be, deploying wireless broadband operations in the United States utilizing the 2.5 GHz band.

⁵ See *Amendment of Parts 2, 25, and 87 of the Commission's Rules to Implement Decisions from the World Radiocommunication Conferences Concerning Frequency Bands Between 28 MHz and 36 GHz and to Otherwise Update the Rules in this Frequency Range*, Report and Order, 18 FCC Rcd 23426, 23445 (2003).

⁶ See *Amendment of Parts 2, 25, and 87 of the Commission's Rules to Implement Decisions from the World Radiocommunication Conferences Concerning Frequency Bands Between 28 MHz and 36 GHz and to Otherwise Update the Rules in this Frequency Range*, ET Docket No. 02-305, Order On Reconsideration, FCC 06-62 (rel. May 8, 2006)[*"BSS/FSS Allocation Suppression Reconsideration Order"*].

⁷ *Id.* at ¶ 10 (citation omitted).

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that are being deployed in the United States in the 2.5 GHz band) on a cochannel basis are insurmountable absent substantial geographic separations in service areas. For example, in authorizing MSS operators to provide an Ancillary Terrestrial Component, the Commission rejected suggestions that the MSS spectrum could be used by operators unrelated to the MSS licensee to provide domestic terrestrial services because “same-band, separate operator sharing is impractical and ill-advised.”⁸ Similarly, and of particular import with respect to Agenda Item 1.9, the Commission has specifically rejected efforts by satellite interests to secure an allocation of the 2500-2520/2670-2690 MHz bands for MSS, concluding “that sharing between terrestrial and satellite systems in the 2500-2520 MHz worldwide MSS downlink (space-to-Earth) band and in the 2670-2690 MHz worldwide MSS uplink (Earth-to-space) band . . . was not feasible.”⁹ This conclusion is hardly surprising, and is fully consistent with the conclusion being reached within the International Telecommunications Union (“ITU”) regarding the infeasibility of cochannel sharing between satellite and terrestrial services. For example, Report ITU-R M.2041, which is titled “Sharing and adjacent band compatibility in the 2.5 GHz band between the terrestrial and satellite components of IMT-2000,” concludes that “[w]hen considering the sharing of the same frequency band between the terrestrial component of IMT-2000 and the MSS, the detailed analysis . . . shows that such sharing is not feasible over the same geographical area. Consequently, Radiocommunication Study Group 8 came to the conclusion that co-frequency sharing is not feasible for networks operating in the same geographical area.”¹⁰

The bottom line is simple – the United States has specifically rejected any domestic allocation of the 2.5 GHz band for satellite services at 2500-2690 MHz because of the potential for cochannel interference, and there is a wealth of evidence that the very sort of wireless broadband services the Commission envisions for the 2.5 GHz band in the United States would be jeopardized by interference from cochannel satellite operations absent sufficient geographic separation. As the United States Government addresses Agenda Item 1.9, it should advocate

⁸ *Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, the L-Band, and the 1.6/2.4 GHz Bands*, Report and Order, 18 FCC Rcd 1962, 1991 (2003).

⁹ *Amendment of Part 2 of the Commission’s Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems*, First Report and Order and Memorandum Opinion and Order, 16 FCC Rcd 17222, 17227-28 (2001), cited in *Amendment of Parts 2, 25, and 87 of the Commission’s Rules to Implement Decisions from World Radiocommunication Conferences Concerning Frequency Bands Between 28 MHz and 36 GHz and to Otherwise Update the Rules in this Frequency Range*, Report and Order, 18 FCC Rcd 23426, 23443-44 (2003); *Amendment of Parts 2, 25, and 87 of the Commission’s Rules to Implement Decisions from the World Radiocommunication Conferences Concerning Frequency Bands Between 28 MHz and 36 GHz and to Otherwise Update the Rules in this Frequency Range*, Notice of Proposed Rulemaking, 17 FCC Rcd 19756, 19773 (2002). See also *Amendment of Part 2 of the Commission’s Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems*, Notice of Proposed Rule Making and Order, 16 FCC Rcd 596, 624-25 (2001) (“[s]haring between terrestrial and satellite systems would present substantial technical challenges in that band”).

¹⁰ ITU-R Study Group 8, “Sharing and adjacent band compatibility in the 2.5 GHz band between terrestrial and satellite components of IMT-2000,” Report ITU-R M.2041, at 8 (2003).

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positions that will promote the fullest possible deployment of wireless broadband terrestrial facilities in the United States by limiting the potential for interference from satellite operations.

WCA believes that there are two steps the United States can take to achieve this result within the context of the WRC-07 process. First, the United States should adopt the positions advocated in Document WAC/101, which proposes that Table 21-4 of the Radio Regulations be amended to provide hard power flux density (“PFD”) limits for satellite services operating in the 2500-2690 MHz band. Admittedly, WCA supports this document somewhat reluctantly, since the proposed PFD limits do not fully protect operations within the United States. Studies conducted by WCA members establish that, in fact, MSS systems operating at the PFD limits specified in Document WAC/101(27.4.06) can cause interference to terrestrial 2.5 GHz band operations in the United States. To the limited extent it is possible to mitigate that interference, such efforts would impose on wireless broadband service providers exactly the sorts of costs that the Commission sought to avoid with this month’s *BSS/FSS Allocation Suppression Reconsideration Order*. Nonetheless, WCA recognizes that the PFD levels required to protect US operations in the 2.5 GHz band are not likely to be adopted at WRC-07. Most other nations do not have the entrenched base of terrestrial operations in the 2.5 GHz band that require the same level of protection as domestic operations, and it has become clear during the proceedings leading to WRC-2007 that the United States must compromise here. As the Commission recognized in the *BSS/FSS Allocation Suppression Reconsideration Order*, the current Radio Regulations provide scant protection to US terrestrial operations in the 2.5 GHz band, and the hard PFD limits proposed in Document WAC/101 are vastly superior. Thus, WCA submits that the best interests of the United States will be served by embracing Document WCA/101, rather than fighting a futile battle for more restrictive limits at WRC-07.¹¹

Second, the United States can and should support the elimination of obsolete allocations of 2.5 GHz spectrum for MSS in Region 2, as proposed by a majority of IWG-3 and reflected in Document WAC/102A.¹² As that document emphasizes, “[w]ithin Region 2 any satellite service

¹¹ As such, the Commission’s embrace of Document WAC/101 should not be read as suggesting that the Commission can revisit its decisions to preclude any satellite use of the 2.5 GHz band domestically. WCA is accepting of the PFD limits specified in that document as part of a holistic approach to Agenda Item 1.9 that also includes elimination of any allocation to MSS in the 2.5 GHz band within Region 2. *See infra*. WCA would strongly oppose any domestic effort to allocate spectrum in the 2500-2690 MHz band to MSS because MSS satellites operating within the United States at the hard PFD limits specified in Document WCA/101(27.4.06) clearly would interfere with domestic terrestrial operations in the band and impose upon wireless broadband service providers the very interference mitigation expenses that the *BSS/FSS Allocation Suppression Reconsideration Order* sought to prevent.

¹² Within the US Joint Task Group 6-8-9, it has been suggested that the United States advocate limiting MSS downlinks in the 2500-2690 MHz band to national and regional systems only as a means of mitigating interference to domestic terrestrial systems in conjunction with the hard PFD limits specified in Document WAC/101. WCA is supportive of that proposal, but does not view it as a substitute for elimination of the 2.5 GHz band MSS allocation within Region 2. Emissions from national and regional systems can impact operations in neighboring countries that are not part of the system, and thus the best means of protecting United States domestic operations is to join with the rest of Region 2 in advocating suppression of the MSS allocation in the band.

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launched will naturally overlap many other Region 2 countries and may have the effect of interfering with existing and planned terrestrial services within that band.” During CITEL’s examination of this issue to date, not one country within Region 2 has indicated any interest in deploying MSS in the 2500-2690 MHz band. As such, the United States Government can press for the complete elimination of the MSS allocation in the 2.5 GHz band within Region 2, enhancing protection of US terrestrial deployments, without running afoul of other Region 2 administrations.

The only substantive difference between the views of the majority of IWG-3 and the minority is the minority’s proposal in WAC/102B that a secondary MSS allocation be retained within Region 2. WCA appreciates that such an allocation could be attractive at first blush, as it does not entirely foreclose the possibility of MSS service elsewhere in Region 2, while at the same time assuring that the United States’ domestic terrestrial services will be entitled to relief should interference occur. However, as a practical matter, the ITU lacks procedures that assure US consumers will not suffer interference from foreign MSS systems, even if those systems are classified as secondary. The problem, in a nutshell, is that if interference does occur, there is no assurance that it will be eliminated rapidly – to the contrary, it could take the ITU an interminable time to resolve any dispute. And all the while, American consumers will be denied their wireless broadband service.

The United States’ position on allowing even secondary status for MSS in Region 2 should be informed by Commission’s recent *BSS/FSS Allocation Suppression Reconsideration Order*. There, the Commission refused to even consider BSS systems in the 2.5 GHz band on a case-by-case basis, recognizing that even the possibility of satellite usage of the band “would introduce complexity, uncertainty and the likelihood of increased costs for terrestrial operators in the band 2500-2690 MHz to build their systems with capabilities for mitigating possible interference from BSS operations.”¹³ The same will occur here – if MSS can be licensed, even on a secondary basis, by other Region 2 administrations, terrestrial wireless broadband system operators using the 2.5 GHz band will suffer unnecessary complexity, uncertainty and increased costs because of the need to anticipate and protect against potential MSS interference.

Were other Region 2 administrations to be advocating a retention of the 2.5 GHz band MSS allocation, retention of a secondary allocation might represent a reasonable compromise position. However, no Region 2 administration appears to be advocating preservation of even a secondary MSS allocation at 2.5 GHz. This is hardly surprising, as there is no compelling need for any use of the 2.5 GHz band for MSS in Region 2. The minority argues, in effect, that MSS can serve a valuable role in providing services to remote areas or during those rare emergencies when terrestrial services may be temporarily unavailable. WCA does not contest either of those points. What the minority conveniently ignores, however, is the point made cogently by the IWG-3 majority in Document WAC/102A – “In addition to the allocation of the 2500-2520 MHz and 2670-2690 MHz band for MSS within Region 2, the bands 137-137.025 MHz, 148-150.05

¹³ *BSS/FSS Allocation Suppression Reconsideration Order* at ¶ 13.

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MHz, 399.9-401 MHz, 406-406.1 MHz, 455-456 MHz, 459-460 MHz, 1518-1559 MHz, 1610-1660.5 MHz, 1668.4-1675 MHz, 1930-1970 MHz, 1980-2025 MHz, 2120-2200 MHz, 2483.5-2500 MHz, 14-14.5 GHz, 19.7-21.2 GHz, 29.5-31 GHz, 39.5-41 GHz, among others, are also allocated for MSS within Region 2.” While the minority document shamelessly trumpets the role that MSS played in the immediate aftermath of Hurricane Katrina, it conveniently forgets that none of the spectrum involved was at 2.5 GHz. Moreover, the minority ignores that within the United States there is 40 MHz at 2000-2020/2180-2200 MHz that recently has been licensed for future MSS systems that are on schedule to be deployed shortly.¹⁴ There is more than enough spectrum available to the United States and other Region 2 administrations to accommodate MSS, without burdening those operating terrestrial systems in the 2500-2690 MHz band with the complexity, uncertainty and costs associated with even a secondary MSS allocation in the band. Thus, the United States should strike while the iron is hot (*i.e.*, when no Region 2 administration has expressed a desire to retain any MSS allocation in the band) and eliminate the risk that consumers will suffer interference to their terrestrial wireless broadband service from foreign MSS systems.

In short, adoption of the proposals advanced in Documents WAC/101 and WAC/102A will have the salutary effect of maximizing the prospect for realizing the objective of the United States and other Region 2 administrations of promoting the 2.5 GHz band for terrestrial broadband serviceFs. WCA therefore urges that the positions reflected in those documents be adopted as official positions of the United States Government at WRC-07.

Respectfully submitted,

/s/ Paul J. Sinderbrand

Paul J. Sinderbrand

Counsel to the Wireless Communications
Association International, Inc.

¹⁴ The 2 GHz MSS spectrum is presently licensed to TMI Communications and Company Limited Partnership (“TMI”) and ICO Satellite Services (“ICO”). *See Use of Returned Spectrum in the 2GHz Mobile Satellite Service Frequency Bands*, IB Docket Nos. 05-220 and 05-221, Order, FCC 05-204 (rel. Dec. 9, 2005). However, Globalstar still has a pending petition on file seeking to reinstate its 2 GHz authorization, and the decision to award TMI and ICO all of the abandoned spectrum was made subject to the FCC’s final action with respect to Globalstar. Also, Inmarsat Ventures Limited and Inmarsat Global Limited and Globalstar have filed petitions for reconsideration of the order awarding the abandoned spectrum to TMI and ICO, which remain pending. *See Consolidated Petition of Inmarsat Ventures Limited and Inmarsat Global Limited for Reconsideration*, IB Docket Nos. 05-220 and 05-221 (filed Jan. 9, 2006); *Petition of Globalstar for Reconsideration*, IB Docket Nos. 05-220 and 05-221 (filed Jan. 10, 2006).

WILKINSON) BARKER) KNAUER) LLP

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cc: Alexander Roytlat (via email to wrc07@fcc.gov)

Emily Willeford

Fred Campbell

Bruce Gottlieb

Barry Ohlson

Aaron Goldberger