

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the matter of)
Globalstar, Inc.) RM-11685
Petition for Rulemaking to Reform the)
Commission’s Regulatory Framework for the)
Terrestrial Use of the Big LEO MSS Band)

REPLY

The Wireless Communications Association International (“WCAI”), by its attorneys and pursuant to Section 1.405(b) of the Commission’s Rules, submits this reply in support of those initial comments in this proceeding that raise serious questions regarding the November 13, 2012 petition by Globalstar, Inc. (“Globalstar”) proposing to modify the rules governing the 2.4 GHz band Mobile Satellite Service (“MSS”) spectrum for which Globalstar is the sole licensee.¹

While WCAI expresses no views regarding Globalstar’s proposed changes to the rules governing the 1610-1618.725 MHz MSS uplink band, WCAI shares the concerns of many commenters regarding the potential adverse impact of Globalstar’s proposed operations in the 2.4 GHz band on unlicensed IEEE 802.11-based Wi-Fi and on licensed operations employing

¹ See Petition of Globalstar for Rule Making, RM-11685 (filed Nov. 13, 2012) [“Globalstar Petition”]. Specifically, the Globalstar Petition requests the removal of existing ancillary terrestrial component (“ATC”) gating requirements, and proposes: (i) immediate introduction of a terrestrial low power service (“TLPS”) over Globalstar’s spectrum at 2483.5-2495 MHz and adjacent unlicensed spectrum at 2473-2483.5 MHz; and (ii) a long-term LTE-based service over Globalstar’s spectrum at both 1610-1617.775 MHz and 2483.5-2495 MHz. While Globalstar proclaims that “TLPS will also deliver meaningful public safety benefits,” it fails to explain how public safety would access Globalstar’s spectrum, much less provide any proposed rules that would assure public safety access while protecting Wi-Fi, Broadband Radio Service (“BRS”) and other incumbent users from potential interference. Globalstar Petition at 4.

The Consumer and Governmental Affairs Bureau gave notice of the Globalstar Petition on November 30, 2012, commencing a 30 day public comment period. See Consumer & Governmental Affairs Bureau Reference Information Center Petition for Rulemaking Filed, *Public Notice*, Report No. 2971 (rel. Nov. 30, 2012). Subsequently, the deadline for public comment was extended until January 14, 2013. See International Bureau, Office Of Engineering And Technology, And Wireless Telecommunications Bureau Grant Extension Of Comment Deadline On Globalstar, Inc. Petition For Rulemaking, *Public Notice*, DA 12-2026 (rel. Dec. 14, 2012).

BRS Channel 1 at 2496-2502 MHz. Those comments raise a host of unanswered questions regarding Globalstar's plans for the 2.4 GHz band and the potential impact of those plans for incumbent services.² Simply stated, the Commission should not issue a notice of proposed rulemaking on Globalstar's suggested rules unless and until Globalstar answers the fundamental questions raised by the initial commenters and demonstrates that its proposal can and will be implemented in a manner that prevents interference to Wi-Fi, BRS Channel 1 and the other incumbent services that could be adversely impacted.

In light of the role that WCAI has played over the past decade in connection with the ongoing relocation of BRS Channel 1 from the 2150-2156 MHz band to 2496-2502 MHz to clear the 2 GHz band for the Advanced Wireless Service ("AWS"),³ WCAI is particularly troubled by the potential for Globalstar's terrestrial operations to cause interference to BRS Channel 1. Although not all BRS Channel 1 operations have yet to be relocated, to date the relocation process has been facilitated by the Commission's clear and unambiguous rules and policies with respect to the interplay of Globalstar's terrestrial operations and BRS Channel 1. As is discussed in detail in the comments submitted by Clearwire Corporation, whenever the Commission has

² See Comments of the Wi-Fi Alliance, RM-11685 (filed Jan. 14, 2013) (raising concerns regarding possible loss of Wi-Fi Channel 11 and increased filtering requirements on manufacturers of unlicensed devices); Comments of the Association of Home Appliance Manufacturers, RM-11685 (filed Jan. 14, 2013) (raising potential interference and other concerns in the 2.4 GHz band); Comments of Clearwire Corporation, RM-11685, at 6, 12 (filed Jan. 14, 2013) ["Clearwire Comments"]; Comments of EIBASS to the Globalstar Petition for Rulemaking, RM-11685, at 9 (filed Jan. 14, 2013) (Globalstar should provide additional information and address re-farming the 2.5 GHz TV broadcast auxiliary service band); Comments of the Wireless Internet Service Providers Association, RM-11685, at 3 (filed Jan. 14, 2013) (raising concerns that Globalstar's TLPS proposal may cause harmful interference to 2.4 GHz Wi-Fi). See also Comments of the U.S. GPS Industry Council, RM-11685, at 1-2 (filed Jan. 14, 2013) (Globalstar must protect the installed GPS user base); Comments of the Bluetooth Special Interest Group, RM-11685 (filed Jan. 14, 2013).

³ See, e.g., Comments of the Wireless Communications Ass'n Int'l, IB Docket No. 07-253 (filed Nov. 19, 2007); Reply Comments of the Wireless Communications Ass'n Int'l, IB Docket No. 07-253 (filed Jan. 3, 2008); Petition of the Wireless Communications Ass'n Int'l for Reconsideration, IB Docket No. 02-364 (filed Sept. 8, 2004); Reply of the Wireless Communications Ass'n Int'l to Consolidated Opposition to Petition for Reconsideration, IB Docket No. 02-364 (filed Nov. 8, 2004); Reply Comments of the Wireless Communications Ass'n Int'l, IB Docket No. 02-364 (filed July 25, 2003).

addressed the potential interference issues associated with allowing Globalstar to operate terrestrial facilities in its 2.4 GHz MSS spectrum, the Commission consistently has ensured that Globalstar's terrestrial facilities not cause harmful interference to BRS Channel 1.⁴ That clarity must be retained as the Commission considers allowing Globalstar to provide terrestrial service free of the ATC gating requirements.

Indeed, when the Commission most recently addressed the issue in 2008, it reiterated that “[o]ur rules impose an absolute obligation on the MSS/ATC operator to resolve any harmful interference to other service.”⁵ Thus, it warned Globalstar that, even if it complied with the power limitations, out-of-band emission limits and other technical rules applicable to ATC operations, Globalstar has an “absolute obligation to eliminate any harmful interference to BRS that may nevertheless occur, including its obligation to reduce the power of operations in its upper channel or channels, or cease operations entirely in its upper channel or channels, to eliminate harmful interference to BRS Channel 1 operations.”⁶ It also stressed that terrestrial operations by Globalstar “enjoys no rights *vis-à-vis* other primary services in the same or adjacent bands.”⁷ The Commission acknowledged that this regulatory regime could have the practical impact of “rendering it infeasible” for Globalstar to deploy ATC in some areas, but recognized that affording BRS Channel 1 primacy was necessary to ensure that 2.1 GHz BRS

⁴ See Clearwire Comments, at 24-25, *citing* Review of the Spectrum Sharing Plan Among Non-Geostationary Satellite Orbit Mobile Satellite Service Systems in the 1.6/2.4 GHz Bands, *Report and Order*, 19 FCC Rcd 13356 (2004); Spectrum and Service Rules for Ancillary Terrestrial Components in the 1.6/2.4 GHz Big LEO Bands, *Report and Order and Order Proposing Modification*, 23 FCC Rcd 7210 (2008) [*“Globalstar ATC Modification Order”*].

⁵ *Globalstar ATC Modification Order*, 23 FCC Rcd at 7223 (citation omitted).

⁶ *Id.* at 7222.

⁷ *Id.* at 7223.

licensees are made whole as they are shoe-horned into the 2.5 GHz band to free spectrum for AWS.⁸

Section 25.255 of the Commission's Rules, which governs Globalstar's ATC operations, speaks with unambiguous clarity as to the protection Globalstar must provide BRS Channel 1 – “[i]f harmful interference is caused to other services by ancillary MSS ATC operations, either from ATC base stations or mobile terminals, the MSS ATC operator must resolve such interference.”⁹ However, Globalstar has not proposed that a similar unequivocal obligation be incorporated into new Part 27 rules governing terrestrial use of the 2.4 GHz band ATC spectrum. If the Commission does advance this proceeding to a notice of proposed rulemaking, the Commission can and should incorporate an analog to Section 24. 255 into proposed Part 27 rules to assure that the interference protection BRS Channel 1 has long been guaranteed is not inadvertently undermined by the elimination of the ATC gating requirements.

The potential for interference from Globalstar terrestrial operations into BRS Channel 1 is hardly an academic concern. As the record makes clear, Globalstar has provided such scanty information regarding its proposed TLPS that it simply is not possible for BRS interests to accurately assess the potential for interference to existing and planned BRS operations.¹⁰ However, all preliminary indications are that operations on BRS Channel 1 could be seriously compromised were Globalstar authorized to deploy TLPS under its proposed rules.¹¹

⁸ *Id.* at 7221-22.

⁹ 47 C.F.R. § 25.255.

¹⁰ *See* Clearwire Comments at 6 (“In the absence of detailed information or baseline limits concerning the location, number, directionality, height, and density of TLPS base stations and user equipment, modeling can provide only limited insight into real-world conditions.”); *id.* at 12 (“Globalstar, for example, does not provide information or baseline limits concerning the location, number, directionality, height, and density of TLPS base stations or user equipment. These omissions mean that modeling can provide only limited insight into real-world conditions.”).

¹¹ *See id.* at 15-16.

Although not mentioned by any of the initial comments, WCAI is concerned that Globalstar has failed to provide sufficient information detailing its plan to make software or modifications to existing 802.11 Wi-Fi devices to expand their operating frequencies above 2483.5 and permit them to provide TLPS. Buried in a footnote to the Globalstar Petition, Globalstar suggests that it intends to have the original equipment authorization grantees (or their authorized representatives) submit “permissive change” filings pursuant to Section 2.1043 of the Commission’s Rules proposing to expand the operating frequencies of those devices above 2483.5 MHz.¹² Although Globalstar does not specifically say as much, those filings presumably will be required demonstrate to the Commission that the device, as modified to operate above 2483.5 MHz, complies with whatever technical restrictions are imposed by the Commission to protect Wi-Fi and BRS Channel 1. What is unclear, however, is how Globalstar will maintain control over the upgraded devices that belong to its customers, so that Globalstar will be able to remotely reduce power, limit bandwidth, or, if necessary, cease operations should interference to BRS Channel 1 occur. Nor does Globalstar address how it will assure that only those devices under its remote control are upgraded to permit operations above 2483.5 MHz, and how those devices that it does upgrade will be precluded from operating above 2483.5 MHz once the owner of the device ceases to be a Globalstar customer. Absent more detail from Globalstar on these issues, neither the Commission nor the BRS Channel 1 licensee community can take comfort that TLPS can be implemented without a material risk of interference to BRS Channel 1 operations.

¹² See Globalstar Petition at 42 n.105.

In conclusion, the record before the Commission raises numerous unanswered questions as to how Globalstar intends to protect Wi-Fi, BRS Channel 1 and other incumbents when implementing terrestrial operations outside the current ATC gating requirements. Unless and until those questions are satisfactorily answered, the Commission should refrain from issuing the notice of proposed rulemaking Globalstar advocates.

Respectfully submitted,

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CERTIFICATE OF SERVICE

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