

Before the  
**FEDERAL COMMUNICATIONS COMMISSION**  
Washington, DC 20554

In the Matter of )  
 )  
Terrestrial Use of the 2473-2495 MHz Band )  
for Low-Power Mobile Broadband Networks; ) IB Docket No. 13-213  
Amendments to Rules for the Ancillary ) RM-11685  
Terrestrial Component of Mobile Satellite )  
Service Systems )

**COMMENTS OF  
THE WIRELESS COMMUNICATIONS ASSOCIATION INTERNATIONAL**

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May 5, 2014

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## EXECUTIVE SUMMARY

WCAI does not dispute the need for additional spectrum to meet the burgeoning demand for wireless broadband. Indeed, WCAI's members are today meeting that demand by, among other things, utilizing BRS Channel 1. WCAI has no objection in principle to Globalstar's use of its MSS spectrum to meet that demand via a terrestrial network. However, the Commission must make certain that Globalstar provides BRS Channel 1 with the absolute interference protection that was part and parcel of the Commission's decision to relocate BRS Channel 1 from the 2.1 GHz band to 2496-2502 MHz.

The Commission has stated with crystalline clarity that “[o]ur rules impose an absolute obligation on the MSS/ATC operator to resolve any harmful interference to other services” as a result of terrestrial operations. Thus, it has warned Globalstar that, even if it complies with the power limitations, out-of-band emission limits and other technical rules applicable to terrestrial use of its spectrum, 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.” The Commission acknowledged that this regulatory regime could have the practical impact of “rendering it infeasible” for Globalstar to deploy terrestrial service in some areas, but recognized that affording BRS Channel 1 primacy was necessary to ensure that 2.1 GHz BRS licensees are made whole as they are shoe-horned into the 2.5 GHz band to free spectrum for AWS.

There remain a myriad of unanswered questions as to how Globalstar intends to meet this obligation. It has promised to submit in response to the *Notice* a technical showing that its proposed limits on unwanted emissions above 2495 MHz will protect BRS Channel 1, and WCAI looks forward to reviewing that showing. Moreover, the Commission must assure that all devices capable of operating at 2483.5-2495 are under Globalstar's control at all times so that Globalstar can meet its absolute obligation to provide interference protection to BRS Channel 1.

Finally, the equipment authorization requirements applicable to master access points and client devices used in Globalstar's terrestrial network must assure compliance with the rules and policies designed to protect BRS Channel 1. The current rules require that those devices obtain certifications, and Globalstar has not presented a compelling case for allowing use of the less strict “permissive change” process for its benefit when others are required to obtain new certifications under the rules.

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The Wireless Communications Association International (“WCAI”), by its attorneys and pursuant to Section 1.415(a) of the Commission’s Rules,<sup>1</sup> hereby submits its initial comments in response to the *Notice of Proposed Rulemaking* (the “*Notice*”) in the above-referenced proceeding.<sup>2</sup>

**I. INTRODUCTION.**

With the *Notice*, the Commission has proposed to modify its rules governing Ancillary Terrestrial Component (“ATC”) use of Mobile Satellite Service (“MSS”) spectrum to permit Globalstar, Inc. (“Globalstar”), the sole MSS licensee in the 2483.5-2495 GHz band, to deploy a low-power broadband network utilizing that spectrum, along with adjacent unlicensed spectrum at 2473-2483.5 MHz. WCAI appreciates that, consistent with WCAI’s response to the Globalstar petition for rulemaking that commenced this proceeding,<sup>3</sup> the *Notice* does not propose

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<sup>1</sup> 47 C.F.R. § 1.41.5(a).

<sup>2</sup> See Terrestrial Use of the 2473-2495 MHz Band for Low-Power Mobile Broadband Networks; Amendments to Rules for the Ancillary Terrestrial Component of Mobile Satellite Service Systems, *Notice of Proposed Rulemaking*, 28 FCC Rcd 15351 (2013) [“*Notice*”].

<sup>3</sup> See Reply of the Wireless Communications Association Int’l, Inc., RM-11685 (filed Jan. 29, 2013) [“WCAI RM Comments”]. In its comments in response to the Globalstar petition for

to modify Globalstar's long-standing absolute obligation to protect Broadband Radio Service ("BRS") Channel 1 usage from harmful interference when engaged in terrestrial use of its MSS spectrum. WCAI is nonetheless troubled by the numerous unanswered questions as to just how Globalstar will satisfy that obligation, many of which revolve around Globalstar's plan to make software modifications to existing Institute of Electrical and Electronics Engineers ("IEEE") 802.11 Wi-Fi client devices to activate Wi-Fi Channel 14, the use of which has heretofore been banned in the United States. Thus, WCAI urges that the Commission take no action in this proceeding until Globalstar fully answers those questions and establishes that it can, as a practical matter, satisfy its absolute obligation to protect operations on BRS Channel 1.

## **II. BRS CHANNEL 1'S ABSOLUTE RIGHT TO PROTECTION AGAINST HARMFUL INTERFERENCE MUST BE PRESERVED.**

Having been active for over a decade in connection with the ongoing relocation of BRS Channel 1 from the 2150-2156 MHz band to 2496-2502 MHz to clear spectrum for the Advanced Wireless Service ("AWS"),<sup>4</sup> WCAI is troubled by the lingering questions surrounding the potential for Globalstar's terrestrial operations to cause interference to relocated BRS Channel 1. Although not all BRS Channel 1 operations have yet to be relocated, so far the relocation process has been facilitated by the Commission's clear and unambiguous pronouncement that Globalstar's adjacent channel terrestrial facilities may not cause harmful

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rulemaking that commenced this proceeding, WCAI discussed in detail its interest in protecting BRS Channel 1 from harmful interference. *See id.*

<sup>4</sup> *See, e.g.,* Comments of the Wireless Communications Ass'n Int'l, Inc., IB Docket No. 07-253 (filed Dec. 19, 2007); Reply Comments of the Wireless Communications Ass'n Int'l, Inc., IB Docket No. 07-253 (filed Jan. 3, 2008); Petition of the Wireless Communications Ass'n Int'l, Inc. for Reconsideration, IB Docket No. 02-364 (filed Sept. 8, 2004); Reply of the Wireless Communications Ass'n Int'l, Inc. to Consolidated Opposition to Petitions for Reconsideration, IB Docket No. 02-364 (filed Nov. 8, 2004); Reply Comments of the Wireless Communications Ass'n Int'l, Inc., IB Docket No. 02-364 (filed July 25, 2003).

interference to BRS Channel 1.<sup>5</sup> That clarity must be retained as the Commission considers allowing Globalstar to utilize its MSS spectrum to provide a proposed low-power terrestrial service.

The Commission has stated with crystalline clarity that “[o]ur rules impose an absolute obligation on the MSS/ATC operator to resolve any harmful interference to other services” as a result of terrestrial operations.<sup>6</sup> Thus, it warned Globalstar that, even if it complies with the power limitations, out-of-band emission limits and other technical rules applicable to terrestrial use of its spectrum, 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.”<sup>7</sup> The Commission also stressed that terrestrial operations by Globalstar “enjoys no rights *vis-à-vis* other primary services in the same or adjacent bands.”<sup>8</sup> The Commission acknowledged that this regulatory regime could have the practical impact of “rendering it infeasible” for Globalstar to deploy terrestrial service in some areas, but recognized that affording BRS Channel 1 primacy was necessary to ensure

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<sup>5</sup> See 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, Fourth Report and Order and Further Notice of Proposed Rulemaking*, 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*”]. This pronouncement of an absolute interference protection obligation is critical to assuring that those BRS Channel 1 licensees who are involuntarily relocated to the 2496-2502 MHz band can be made whole, as those licensees are not subject to interference from MSS or any other source when operating in 2150-2156 MHz band. If the Commission retreats from its commitment of absolute interference protection, it is questionable whether AWS licensees will be able to satisfy the obligations they must meet before involuntarily relocating BRS Channel 1 licensees to 2496-2502 MHz.

<sup>6</sup> *Globalstar ATC Modification Order*, 23 FCC Rcd at 7223 (citation omitted).

<sup>7</sup> *Id.* at 7222.

<sup>8</sup> *Id.* at 7223.

that 2.1 GHz BRS licensees are made whole as they are shoe-horned into the 2.5 GHz band to free spectrum for AWS.<sup>9</sup>

Consistent with these policy pronouncements, Section 25.255 of the Commission's Rules imposes on Globalstar, like any MSS licensee operating terrestrially, an absolute obligation to cure any interference it causes to BRS Channel 1: "If 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 any such interference."<sup>10</sup> Recognizing that compliance with this obligation may prove difficult, the Commission recommended that Globalstar "can significantly reduce the risk of harmful interference to BRS Channel 1 operations by siting its base stations using physical separation or terrain blocking to minimize their impact on BRS Channel 1 operations."<sup>11</sup> However, Globalstar's latest business plan appears to envision access points in urban and suburban areas where they are likely to be in close proximity to mobile devices and base stations employing BRS Channel 1, a deployment that will not provide the physical separation or terrain blocking recommended by the Commission. And that begs the question – if Globalstar is going to be operating its terrestrial network in close proximity to BRS Channel 1 operations, how does Globalstar intend to meet its obligation to avoid interference?

As a preliminary matter, WCAI supports the Commission's proposal to regulate Globalstar's proposed low-power terrestrial service as ATC.<sup>12</sup> Although there remain significant

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<sup>9</sup> *Id.* at 7221-22.

<sup>10</sup> *See* 47 C.F.R. § 25.255.

<sup>11</sup> *Globalstar ATC Modification Order*, 23 FCC Rcd at 7224.

<sup>12</sup> *See Notice*, 28 FCC Rcd at 15352, 15357-59. It is worth noting that upon release of the *Notice*, Globalstar advised financial analysts that "while the proposed new part 25 rules [including the use of ATC] [were] not what we requested, they are, in fact, better." *See* Thomas Reuters, *Edited Transcript, GSAT – Globalstar Inc. to Host Call to Discuss FCC Proposed Rules*

unanswered questions about how Globalstar intends to manage terrestrial operations to provide BRS Channel 1 with the requisite interference protection, WCAI agrees with the *Notice* that “due to the proposed managed deployment of this equipment in a unique radiofrequency environment involving both unlicensed and licensed operations, the proposed operations are ancillary to Globalstar’s licensed MSS operations and are thus appropriately considered for licensing as ATC.”<sup>13</sup>

More importantly, however, whether the Commission ultimately adopts the *Notice*’s proposal to regulate Globalstar’s low-power terrestrial service as ATC or establishes a separate regulatory regime, the Commission must make clear that its prior pronouncements regarding the obligation of Globalstar to protect BRS Channel 1 remain applicable.<sup>14</sup> The *quid pro quo* for allowing Globalstar to utilize the MSS spectrum terrestrially has always been the provision of absolute protection against interference to BRS Channel 1. The fact that Globalstar now has cobbled together yet another new business plan does not change the nature of that bargain, and certainly does not justify subjecting BRS Channel 1 to harmful interference.

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*for Terrestrial Broadband Services and Near-term Outlook for Relief*, at 3 (Nov. 6, 2013), [http://www.globalstar.com/en/ir/docs/-GSAT-Transcript-2013-11-06T15\\_00.pdf](http://www.globalstar.com/en/ir/docs/-GSAT-Transcript-2013-11-06T15_00.pdf).

<sup>13</sup> *Notice*, 28 FCC Rcd at 15358. WCAI takes no position regarding the proposal in Paragraphs 26 and 27 of the *Notice* to relieve Globalstar of certain gating requirements that otherwise would apply to low-power operations under the ATC rules. *See id.* at 15361-62.

<sup>14</sup> WCAI is troubled by Globalstar’s earlier contention that it is “committed to minimizing interference to adjacent band Broadband Radio Service/Educational Broadband Service (BRS/EBS)” at 2.5 GHz.” *See Consolidated Reply of Globalstar, Inc., RM-11685*, at 6 (filed Jan. 29, 2013) [“Globalstar RM Reply”]. Globalstar’s obligation is not to minimize interference, it is to avoid it entirely. If Globalstar cannot meet that obligation, then there is no reason for the Commission to authorize it to operate its proposed low-power terrestrial network.

### III. MATERIAL UNANSWERED QUESTIONS AS TO HOW GLOBALSTAR INTENDS TO PROTECT BRS CHANNEL 1 REMAIN.

#### A. *GLOBALSTAR HAS YET TO DEMONSTRATE THAT ITS PROPOSED LIMITS ON UNWANTED EMISSIONS FROM LOW-POWER TERRESTRIAL DEVICES ADEQUATELY PROTECT BRS CHANNEL 1.*

Globalstar has proposed, and the *Notice* seeks comment on, relaxing the unwanted emission limits that are designed to protect BRS Channel 1 by providing a 3 dB reduction within the first 5 megahertz above 2495 MHz (*i.e.*, directly within the lower 4 megahertz of BRS Channel 1).<sup>15</sup> In addition, Globalstar has proposed, and the Commission has solicited comment on, utilizing a one megahertz measurement bandwidth for evaluation compliance with the above-2495 MHz unwanted emission limits rather than the 100 kilohertz measurement bandwidth that currently applies to unlicensed devices operating in the 2.4 GHz band.<sup>16</sup> Yet, to date Globalstar has failed to provide any analysis demonstrating that its proposed technical requirements will protect BRS Channel 1 operations from harmful interference.<sup>17</sup>

That failure, quite frankly, raises a significant red flag. In response to Globalstar's petition for rulemaking, WCAI and others expressed serious concerns about interference to BRS

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<sup>15</sup> See *Notice*, 28 FCC Rcd at 15363-64. More specifically, under this proposal the unwanted restriction on Globalstar's low-powered terrestrial service would require that "[e]missions above 2495 MHz shall be attenuated by a factor of at least  $40 + 10 \log (P)$  dB at the channel edge at 2495 MHz,  $43 + 10 \log (P)$  dB at 5 MHz from the channel edges, and  $55 + 10 \log (P)$  dB at X MHz from the channel edges where X is the greater of 6 MHz or the actual emission bandwidth." *Id.* at 15375 (proposed § 25.149(c)(4)(v)).

<sup>16</sup> See *id.* at 15364 n.86.

<sup>17</sup> Although the *Notice* references certain testing conducted by Jarvinian Wireless Innovation Fund, that testing was limited to evaluating the impact of Globalstar's proposed low-power terrestrial service on unlicensed use of the 2.4 GHz band and did not consider the potential for interference to BRS Channel 1. See *Notice*, 28 FCC Rcd at 15354. Moreover, while Globalstar has suggested that its "incorporation of high selectivity passband filters into its TLPS access points will also limit the risk of harmful interference to BRS-1," it is unclear how Globalstar intends to protect BRS Channels 1 from interference by end user devices that will be software-modified existing Wi-Fi equipment – equipment that presumably lacks Globalstar's passband filters. See Globalstar RM Reply at 7.

Channel 1.<sup>18</sup> Rather than demonstrate that its proposal will be fully protective of BRS Channel 1, Globalstar chose to “kick the can down the road,” contending that “[g]oing forward, Globalstar anticipates providing additional technical analysis regarding these interference issues in the Commission’s open, transparent rulemaking process on Big LEO reforms permitting deployment of TLPS.”<sup>19</sup> Now, with the release of the *Notice*, is the time for Globalstar to satisfy this commitment. WCAI looks forward to reviewing the technical analysis that Globalstar has promised to submit.<sup>20</sup>

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<sup>18</sup> See WCAI RM Comments at 4 (“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.”); Comments of Clearwire Corporation, RM-11685, at 6, 12 (filed Jan. 14, 2013).

<sup>19</sup> Globalstar RM Reply at 7. See also Letter from Regina M. Keeney, Counsel to Globalstar, Inc., to Marlene H. Dortch, Secretary, Federal Communications Commission, RM-11685, at 2 (filed Feb. 22, 2013) (“Globalstar has made clear its commitment to minimize interference to adjacent-band Broadband Radio Service (“BRS”) and Educational Broadband Service (“EBS”) systems and other services, and it recognizes that such interference issues will be a focus of the Commission’s rulemaking.”).

<sup>20</sup> The *Notice* proposes to incorporate the technical rules applicable to Globalstar’s master access points in Section 25.149 of the Commission’s Rules, and in a proposed Note indicates that systems meeting Section 25.149 will be deemed to have met the requirements of Section 25.254. Implicit in this approach is incorporation of Globalstar’s proposal that its low-power master access points would not be considered “base stations” for purposes of Section 25.254(d) and the companion provision in Section 27.53(1)(2). See Petition of Globalstar, Inc. for Rulemaking, RM-11685, App. A at 11-12 (filed Nov. 13, 2012) [“Globalstar Petition”]. Specifically, Globalstar proposed that its terrestrial operations be governed by a modified version of Part 27, and proposed that a new Section 27.53(n)(3) would limit the obligation currently in Section 25.254(d) only to high-power terrestrial base stations. To avoid any ambiguity regarding the rights and obligations of Globalstar and BRS Channel 1 licensees, WCAI suggests that the proposed Note to Section 25.149 be modified to read as follows: “Note to Section (c)(4): Access points meeting the requirements of this section are not “base stations” for purposes of § 25.254 or § 27.53(1)(2).”

*B. THE COMMISSION MUST ASSURE THAT ALL DEVICES CAPABLE OF OPERATING AT 2483.5-2495 ARE UNDER GLOBALSTAR'S CONTROL AT ALL TIMES.*

Among the many questions that remain unanswered regarding Globalstar's proposal is how Globalstar intends to control the devices empowered to operate in the 2483.4-2495 MHz band so that Globalstar is at all times capable of curing any interference to BRS Channel 1 as required by Section 25.255 of the Rules.<sup>21</sup> Although Globalstar's petition provided a very high level overview of its intentions,<sup>22</sup> Globalstar has yet to provide the details necessary to give the Commission any assurance that at all times Globalstar will remain in control of all devices that operate in the 2483.5-2495 MHz band so as to avoid interference to BRS Channel 14 and to its own MSS satellite services.

WCAI is troubled that Globalstar's petition makes several vague references to "terrestrial partners" in contexts that suggest Globalstar may not be in full control of terrestrial use of the 2483.5-2495 MHz band.<sup>23</sup> For example, Globalstar represents that it, "in conjunction with its terrestrial partners will likely deploy thousands of newly-manufactured TLPS access points."<sup>24</sup> Similarly, it states that if the Commission adopts Globalstar's proposal, "Globalstar and its future terrestrial partners will be able to transmit the necessary software update to authenticated customers' 802.11-enabled devices, and, virtually immediately, those devices will be able to

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<sup>21</sup> The *Notice* also raises several questions regarding the feasibility of Globalstar's plan to utilize existing client end user devices via software upgrades. *See Notice*, 28 FCC Rcd at 15369 ("we seek comment on whether the currently deployed devices have the hardware capability to operate in the additional frequency band with the Globalstar proposed protocol. We also seek comment on whether existing devices could be modified through over-the-air software changes, or whether changes to the devices' firmware would be necessary."). WCAI awaits input from those who have manufactured the equipment Globalstar intends to upgrade as to viability of Globalstar's plan.

<sup>22</sup> *See* Globalstar Petition at 42-43.

<sup>23</sup> *See, e.g. id.* at 17, 18, 43, 44.

<sup>24</sup> *Id.* at 17-18.

operate above 2483.5 MHz and receive Globalstar’s managed TLPS offering.”<sup>25</sup> It also argues that security will be maintained because “Globalstar and its future terrestrial partners [will] secure TLPS access points and manage their operation through a network operating systems [sic].”<sup>26</sup> While Globalstar had not provided any specificity as to the nature of its relationship with “terrestrial partners,” the Commission should make clear that Globalstar, as the Commission licensee of the 2483.5-2495 MHz band, both is solely responsible for assuring that the various Commission rules related to low-power use of the 2483.5-2495 MHz band are complied with and must maintain sufficient control over any terrestrial devices that it can promptly cure interference from BRS Channel 1.

But even with that clarification, the *Notice* acknowledges that there remain a myriad of questions as to how Globalstar will maintain sufficient control over the upgraded client 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.<sup>27</sup> For example:

- How will access to the software upgrade Globalstar proposes to transmit to existing Wi-Fi devices to empower use of the 2483.5-2495 MHz band be restricted so that it is available only to Globalstar subscribers?
- What measures will Globalstar take to assure that only its subscribers will be able to obtain new Wi-Fi devices enabled to operate in the 2483.5-2495 MHz band?
- What steps will Globalstar take to assure that those Wi-Fi devices it does upgrade to operate in the 2483.5-2495 MHz band will be precluded from operating in that band once the owner of the device ceases to be a Globalstar customer? This is a

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<sup>25</sup> *Id.* at 17 (citation omitted).

<sup>26</sup> *Id.* at 42.

<sup>27</sup> *See Notice*, 28 FCC Rcd at 15369 (“We also seek comment on the means that Globalstar plans to use to control the availability of software updates and prevent unauthorized modifications to certified equipment. We seek further comment on how Globalstar will limit operation of equipment to parties that are authorized to use its spectrum, and also how we would ensure that the modified devices would be compliant with the proposed rules.”).

particularly key question, as Globalstar's own petition for rulemaking indicates that Globalstar cannot assure the Commission, or BRS Channel 1 licensees, that it has adequate control over client devices of former subscribers once they are no longer being served by an operating master device.<sup>28</sup>

- What restrictions will be placed on master access points equipped to operate at 2483.5-2495 MHz to assure that Globalstar, and only Globalstar, can use them in the United States?

Absent more detail from Globalstar on these issues, neither the Commission nor the BRS Channel 1 licensee community can take comfort that Globalstar's proposed low-power terrestrial service can be implemented without a material risk of interference to BRS Channel 1 operations.

*C. THE EQUIPMENT AUTHORIZATION REQUIREMENTS APPLICABLE TO EQUIPMENT USED IN GLOBALSTAR'S TERRESTRIAL NETWORK MUST ASSURE COMPLIANCE WITH THE RULES AND POLICIES DESIGNED TO PROTECT BRS CHANNEL 1.*

While getting right the technical, operational and security rules and policies applicable to Globalstar's proposed terrestrial network is critical to assuring interference protection for BRS Channel 1, that effort will be for naught if the Commission's equipment authorization requirements are not sufficiently stringent to assure compliance.

For that reason, WCAI agrees with the proposal advanced in the *Notice* to subject all equipment employed as part of Globalstar's terrestrial network to the Commission certification regime for equipment authorization, whether a given piece of equipment is classified as a master access point or a client end user device.<sup>29</sup> Given how important it will be that equipment intended for use in Globalstar's terrestrial network both meets the technical requirements designed to protect BRS Channel 1 and incorporates the functionality required to assure

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<sup>28</sup> In addressing future transitions from its low-powered service to Long Term Evolution ("LTE"), Globalstar notes that "[i]n the unlikely event that a small population of unauthorized TLPS devices remains operational in [areas where the 2483.5-2495 MHz band is being used for LTE], strong interference from a ubiquitous high-power LTE application will clear such residual usage." Globalstar Petition at 43.

<sup>29</sup> See *Notice*, 28 FCC Rcd at 15368.

Globalstar maintains control at all times, it is imperative that all of the equipment operating in the 2483.5-2495 MHz band be subject to a stringent compliance evaluation.<sup>30</sup>

The *Notice* indicates that Globalstar “expects” that the access points that will serve as master devices controlling client end user devices will be new (*i.e.*, not repurposed devices that have passed through the equipment authorization process under the Part 15 regime).<sup>31</sup> To avoid any ambiguity in the event Globalstar’s expectation changes, the Commission should clearly require that any device operating as a master in Globalstar’s low-power network, whether new or a repurposed existing device, obtain a new equipment certification and a new FCC ID before it can operate in the 2483.5-2495 MHz band as part of Globalstar’s low-power terrestrial network. This will assure that the master devices, which are critical to protecting BRS Channel 1 operations from interference, have passed through a strenuous review process.

With respect to client devices, the 802.11-compliant equipment that Globalstar proposes to modify has presumably been certificated by the Commission for use in the 2401-2483.5 MHz band that is presently available for Wi-Fi use in the United States. However, because Wi-Fi Channel 14 is not available for use in the United States, that 802.11-compliant equipment has never been evaluated by Commission staff or any Telecommunications Certification Body for compliance with the technical limits designed to protect BRS Channel 1 with it transmitting. The Commission cannot presume that a given Wi-Fi device will meet the limits on unwanted emissions above 2495 MHz with Channel 14 activated based on certification with Channel 14 (and often Channels 12 and 13) turned off. And, of course, there has been no evaluation of

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<sup>30</sup> Moreover, because these devices will be operating simultaneously under Section 15.247 of the Rules and some variant of the modified Section 25.149 proposed in the *Notice*, the Commission’s proposal to classify devices as composite devices and require certification under both rule parts should be adopted. *See id.*

<sup>31</sup> *See id.* at 15369.

whether whatever functionality is required by the Commission in this proceeding to assure Globalstar control over modified devices can be successfully implemented with any given client device that Globalstar intends to modify.

Section 2.1043 of the Commission's Rules, which dictates when a modification to a certificated device requires a new certification and when it can be the subject of a "permissive change" filing is well-established. Under that rule, unless a Wi-Fi client end user has been certificated as a software defined radio, a manufacturer seeking to implement changes to a Part 15 device to accommodate use by Globalstar under Part 25 would be required to secure a new certification and FCC ID.<sup>32</sup> As the *Notice* recognizes, Globalstar is wrong in asserting that the permissive change process is available to the grantee of the original client device authorization.<sup>33</sup> And, more importantly, given the very real potential for interference to BRS Channel 1 operations if devices exceed the unwanted emissions limits with Channel 14 activated or if the security implementation is deficient, Globalstar provides no compelling argument for the Commission to grant an exception here.

#### **IV. CONCLUSION.**

WCAI is certainly cognizant of the need for additional spectrum to meet the burgeoning demand for wireless broadband. Indeed, it is precisely that demand that WCAI's members are today meeting by, among other things, utilizing BRS Channel 1. WCAI has no objection in principle to Globalstar's use of its MSS spectrum to meet that demand via a terrestrial network. However, the Commission must make certain that Globalstar provides BRS Channel 1 with the absolute interference protection that was part and parcel of the Commission's decision to relocate BRS Channel 1 from the 2.1 GHz band to 2496-2502 MHz. WCA looks forward to

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<sup>32</sup> *See id.* at 15368-69.

<sup>33</sup> *See id.* at 15369 (*citing* Globalstar Petition at 42 n.105).

working with the Commission, Globalstar and other interested parties to assure that this bargain is kept.

Respectfully submitted,

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May 5, 2014