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Via Electronic Filing

Marlene H. Dortch, Secretary
Federal Communications Commission
445 Twelfth Street SW
Washington, DC 20554

Re: *Ex Parte* Notice: *Terrestrial Use of the 2473-2495 MHz Band for Low-Power Mobile Broadband Networks* – IB Docket No. 13-213

Dear Ms. Dortch:

Globalstar hereby responds to the Wi-Fi Alliance's (the "Alliance's") October 14, 2015 *ex parte* letter demanding that the Commission "now close this proceeding" and thus deny consumers the substantial benefits that would otherwise result from Globalstar's Terrestrial Low Power Service ("TLPS").¹ This filing demonstrates that the Alliance's driving motivation in this proceeding is preventing competition from an innovative new service.

The Alliance attempts to support its demand with claims that Globalstar has not performed all of the testing that the Alliance deems necessary. In fact, Globalstar has focused on and performed all of the technical work necessary to demonstrate that TLPS is compatible with other unlicensed services. This work included the week-long demonstration at the Commission's Technology Experience Center ("TEC") in March,² followed by detailed emissions

¹ See Letter from Edgar Figueroa, President and CEO, Wi-Fi Alliance, to Marlene H. Dortch, Secretary, FCC, IB Docket No. 13-213 (Oct. 14, 2015).

² The TEC demonstration and lab work were the outgrowth of a meeting between Globalstar and representatives of unlicensed interests hosted by the Commission's Office of Engineering & Technology ("OET") this past February. At this meeting, OET expressed the need for Globalstar to demonstrate the compatibility of TLPS with other unlicensed services so as to ensure that Globalstar's planned TLPS deployments would not detrimentally impact existing services in the ISM band. OET subsequently agreed to coordinate and observe Globalstar's proposed demonstration at the TEC. Representatives of the International Bureau were also present at this joint meeting. See Letter from Wi-Fi Alliance, et al., to Marlene H. Dortch, Secretary, FCC, IB Docket No. 13-213 (Feb. 9, 2015).

characterization testing at the Commission's own lab in Columbia, Maryland.³ As Globalstar has previously reported, the addition of TLPS operations on Channel 14 at the TEC increased aggregate network throughput by almost 40% with no negative impact on other unlicensed services.⁴ The TEC demonstration was complete, transparent, and open to interested parties, including the Alliance. Later, following the testing in Columbia, OET released a 115 page report showing that Channel 14's emissions characteristics are consistent with the other 2.4 GHz 802.11 channels.⁵

The Commission invited the Alliance to attend and participate in this collaborative work. The Alliance elected not to participate, however, sending only its legal counsel to observe discrete parts of the TEC demonstration and not attending the lab testing in any capacity.⁶ With its recent filing, the Alliance continues its strategy of complaining from afar without adding any meaningful evidence to the record.⁷

Following these test activities, Globalstar undertook real-world deployments of TLPS to confirm the consumer benefits of this service and the lack of any harmful impact on other unlicensed services. Globalstar has requested and received experimental licenses at a number of sites around the country, which it has used to deploy TLPS and improve wireless broadband service to consumers and other users.⁸ As it has recently described, Globalstar spent the summer confirming the ability of TLPS to relieve existing Wi-Fi congestion at a university student center

³ OET oversaw Globalstar's demonstration of consumer experiences and the compatibility of TLPS with other unlicensed services. *See* FCC, Office of Engineering and Technology, Report: TR 15-1002, *Electromagnetic Emissions Characterization of Samples Used at TLPS Demonstration*, IB Docket No. 13-213 (May 7, 2015), <http://apps.fcc.gov/ecfs/document/view?id=60001046632>.

⁴ *See* Letter from Regina M. Keeney, Counsel to Globalstar, Inc., to Marlene H. Dortch, Secretary, FCC, IB Docket No. 13-213 (March 10, 2015).

⁵ *See* Report: TR 15-1002, *supra* note 3.

⁶ *See* Letter from Russell H. Fox, Attorney for Wi-Fi Alliance, to Marlene H. Dortch, Secretary, FCC, IB Docket No. 13-213 (March 12, 2015); Letter from Regina M. Keeney, Counsel to Globalstar, Inc., to Marlene H. Dortch, Secretary, FCC, IB Docket No. 13-213 (March 27, 2015).

⁷ Meanwhile, unable to show any consistent detrimental impact on Wi-Fi, other opponents to TLPS deemed their own results to be not "conclusive." *See* Letter from Rob Alderfer, CableLabs, to Marlene H. Dortch, Secretary, FCC, IB Docket No. 13-213 (Apr. 14, 2015).

⁸ *See* Globalstar Experimental License, Call Sign WH2XNQ (effective Apr. 2, 2015).

in Chicago.⁹ While Globalstar demonstrated a 40% increase in network throughput at the Commission's TEC in March, Globalstar demonstrated a near doubling of network throughput in Chicago when the four-channel network was optimized for the benefit of those consumer devices participating in the demonstration. The Chicago data confirmed that Globalstar can seamlessly integrate TLPS operations on Channel 14 into existing Wi-Fi networks without interfering with any of the current uses of the ISM band and thereby improve the experience of all who are utilizing the network. Indeed, in this campus demonstration designed to assess data throughput, participating client devices experienced a substantial (on average over 90%) increase in throughput when TLPS operations on Channel 14 were implemented. Significantly, this increase in throughput was experienced by devices operating *on all four non-overlapping 802.11 channels*, demonstrating the ability of TLPS to relieve existing Wi-Fi congestion immediately.¹⁰

Thus, Globalstar has continued to demonstrate the substantial consumer benefits that are achievable with TLPS, benefits that even Google now recognizes as being “dramatic.”¹¹ Google has also acknowledged the “extreme congestion of currently available 2.4 GHz spectrum” – congestion that has only grown worse since Globalstar proposed TLPS as a solution almost three years ago, and which TLPS will help ameliorate in a fraction of the time of other proposed “solutions.”¹²

Most recently, Globalstar has deployed TLPS at a middle school in Washington, DC. Eighth grade students in the school are now using TLPS in the classroom on a daily basis for their educational benefit. In the near future, Globalstar will file additional information regarding this latest deployment and the real-world benefits generated for these students.

⁹ See Letter from L. Barbee Ponder IV, General Counsel & Vice President Regulatory Affairs for Globalstar, Inc., to Marlene H. Dortch, Secretary, FCC, IB Docket No. 13-213 (Sep. 10, 2015).

¹⁰ Whether in a controlled environment, a technical laboratory, or a real-world public setting, TLPS is compatible with existing Wi-Fi. At a particular location or in a given geographic area, the addition of Channel 14 will simply create a fourth non-overlapping channel. By spreading the same number of users over four, rather than three, channels, the number of users per channel decreases and all users experience an improvement where TLPS is deployed, whether those users remain on Channels 1, 6, and 11 or move to Channel 14.

¹¹ See Letter from Austin C. Schlick, Director, Communications Law, Google Inc., to Marlene H. Dortch, Secretary, FCC, IB Docket No. 13-213 (Oct. 10, 2015, filed Oct. 13, 2015) (“Google October 10 *Ex Parte*”). See also Letter from L. Barbee Ponder IV, General Counsel & Vice President Regulatory Affairs, Globalstar, Inc., to Marlene H. Dortch, Secretary, FCC, IB Docket No. 13-213 (Oct. 13, 2015).

¹² Google October 10 *Ex Parte* at 2.

Given the tremendous potential consumer benefits that TLPS offers – benefits that Globalstar has consistently cited since filing its Petition for Rulemaking almost three years ago – why is the Alliance now demanding that the FCC end this proceeding? The Commission should consider just whose interests would be furthered by such termination – certainly not the students at the various educational institutions where Globalstar has deployed TLPS or future consumers who would clearly benefit from more broadband spectrum. Rather, the only parties that would gain from terminating this proceeding are, unsurprisingly, the entrenched and powerful members of the Alliance who seek to prevent an innovative alternative to their own service offerings. If the Alliance represented consumer interests or were actually concerned about improving Wi-Fi, its actions and advocacy in this proceeding would be quite different. If the Commission ignores the Alliance’s motives and grants its request, tens of millions of people who rely upon Wi-Fi daily in congested urban environments will suffer the consequences.

The Alliance refuses to recognize that *everyone* is better off when consumers’ wireless demands are spread over four non-overlapping channels rather than just three. Globalstar proves this point with each TLPS demonstration and deployment. It appears that no amount of testing, however, will satisfy Alliance members driven by their self-interests to oppose an innovative, competitive offering. Without any empirical evidence to bank on, the Alliance attempts to conjure up highly improbable interference scenarios to delay a service that would generate tremendous public interest benefits.¹³ The Commission should reject this anti-competitive demand. From a policy perspective, any remote chance of perceptible interference to residential-grade Channel 11 access points would be far outweighed by the enormous consumer benefits that will be generated once the Commission adopts its proposed rules to permit TLPS.

We urge the Commission to enable the significant consumer benefits made possible by this proceeding and to move forward, without further delay, to adopt the rules it proposed two years ago.

Respectfully submitted,

/s/ L. Barbee Ponder IV

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¹³ One need look no further than the flagrant attempt by CableLabs to force a failure of Channel 11 operations during the OET-managed TLPS demonstration in March. *See* Letter from Regina M. Keeney, Counsel to Globalstar, Inc., to Marlene H. Dortch, Secretary, FCC, IB Docket No. 13-213 (Apr. 23, 2015), with attached Declaration of Dr. Kenneth Zdunek of Roberson and Associates, LLC.