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October 13, 2015

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 Google, Inc.'s ("Google's") October 10, 2015 *ex parte* letter in which it suggests that wireless operations on Channel 14 represent too big and too important an opportunity to entrust only to Globalstar.¹ Recently, Globalstar filed technical data regarding a deployment of its Terrestrial Low Power Service (TLPS) technology on a college campus in Chicago, Illinois this past summer.² This data confirmed that Globalstar can integrate TLPS operations on Channel 14 into existing Wi-Fi networks and thereby improve the experience of all who are utilizing the network, without interfering with any of the current uses in the band. Indeed, in a 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.³

¹ 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*").

² 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 (Sept. 10, 2015) ("Globalstar September 10 *Ex Parte*").

³ In its recent letter, Google recognizes the "extreme congestion of currently available 2.4 GHz spectrum" – congestion that has only grown worse since Globalstar proposed TLPS

We appreciate Google's review of our recent *ex parte* and its recognition that this submission "highlights that consumers would benefit dramatically if Wi-Fi Channel 14 . . . became available for public use."⁴ Globalstar expected such dramatic benefits when it petitioned the Commission almost three years ago for authority to offer this innovative new service, while maintaining its core commitment to provide critical mobile satellite services to the public.⁵ TLPS will generate enormous public benefits with widespread industry acceptance and consumer adoption, and Globalstar's belief in the potential of this service has compelled its efforts over the past three years, even in the face of industry opposition largely fueled by companies that offer competing services.

Of equal importance (and seemingly lost on Google) is that the relief Globalstar seeks is in direct response to the Commission's request that licensed operators look for new and innovative uses of their spectrum which have the potential for public benefit. Our petition is in complete alignment with the Commission's bedrock policy of providing licensed spectrum operators flexibility that will increase spectrum efficiency by utilizing their frequencies in ways that make possible innovative new service offerings.⁶ Despite the Commission's

as a solution almost three years ago, and which TLPS will help ameliorate. Google October 10 *Ex Parte* at 2.

⁴ *Id.* at 1.

⁵ Most recently, Globalstar invested more than \$1 billion in a new, second-generation satellite constellation.

⁶ *See, e.g., Implementation of Sections 3(n) and 332 of the Communications Act; Regulatory Treatment of Mobile Services*, Second Report and Order, 9 FCC Rcd 1411 (1994) (adopting flexible use spectrum rights with respect to new PCS licenses); *Amendment of the Commission's Rules to Permit Flexible Service Offerings in the Commercial Mobile Radio Services*, First Report and Order and Further Notice of Proposed Rulemaking, 11 FCC Rcd 8965, ¶ 1 (1996) (allowing CMRS licensees to begin providing fixed wireless services); *Revision of Part 22 and Part 90 of the Commission's Rules to Facilitate Future Development of Paging Systems*, Second Report and Order and Further Notice of Proposed Rulemaking, 12 FCC Rcd 2732 (1997) (encouraging flexible and innovative use of Part 22 paging spectrum); *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, ¶¶ 2, 8, 24 (2001) (granting a "flexible allocation" to Broadband Radio Service licensees and Educational Broadband Service licensees to "encourage investment in and the development of new and innovative technology and services" in the 2.5 GHz band); *Amendment of Part 27 of the Commission's Rules to Govern the Operation of Wireless Communications Services in the 2.3 GHz Band*, Report and Order and Second Report and Order, 25 FCC Rcd 11710, ¶ 24 (2010) (amending the Commission's technical rules to permit incumbent Wireless Communications Services licensees to deploy mobile broadband services, thus "increas[ing] the supply of flexible use spectrum that can be

history of promoting flexibility so that consumers can benefit from these new, innovative offerings, Google now argues – for the first time – that as a *policy matter* the Commission should *force* a sharing regime upon Globalstar similar to the one that the U.S. Government *voluntarily* adopted for its own spectrum in the 3.5 GHz proceeding.⁷ While this tiered sharing regime was an appropriate and agreed-upon solution in the 3.5 GHz proceeding, here Google is advancing its self-interest by proposing to replace the Commission’s existing flexible spectrum policies with a forced “one-size-fits-all” approach rendering licensed spectrum subject to sharing obligations that Google itself could administer.

Google claims – with absolutely no empirical support – that it is “likely” possible to allow general unlicensed use of Channel 14 while still protecting Globalstar’s satellite services from harmful interference.⁸ Google could likely make the same unsupported claim with respect to any licensed operator’s spectrum and even to the proprietary networks of any unlicensed operator. Taken to its logical extreme, Google’s new policy position would have severe negative implications for competition in the wireless industry as all spectrum could become “Google-ized” under its administration, including emerging Wi-Fi First service offerings. What licensed spectrum operator would ever propose a new, innovative spectrum usage solution if, to do so, it would run the risk of having its ideas controlled by Google, resulting in the elimination of any commercial benefit and a higher likelihood of potential interference with its core licensed services?

In addition to establishing harmful precedent, Google’s “one-size-fits-all” approach would, at a minimum, significantly delay the dramatic consumer benefits that are otherwise achievable in this proceeding,⁹ potentially create harm to Globalstar’s licensed satellite services, and contravene the Commission’s sound policies promoting license flexibility and an “all-of-the-above” approach to spectrum use.¹⁰

used to address the explosive nationwide growth in consumer demand for mobile broadband services.”); *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Report and Order, 29 FCC Rcd 6567, ¶¶ 18, 741 (2014) (adopting flexible use for 600 MHz band).

⁷ See *Amendment of the Commission’s Rules with Regard to Commercial Operations in the 3550-3650 MHz Band*, Report and Order and Second Further Notice of Proposed Rulemaking, 30 FCC Rcd 3959, ¶¶ 2-3 (2015).

⁸ Google October 10 *Ex Parte* at 1.

⁹ Like other long-term spectrum initiatives in recent years, the Commission’s policy framework at 3.5 GHz will take significant time to generate meaningful, real-world consumer benefits, and it has not done so to date. In contrast, TLPS will likely provide substantial benefits to consumers within months of a grant of Commission authority.

¹⁰ As Chairman Wheeler and other Commissioners have emphasized, “[a]n effective spectrum strategy requires an all-of-the-above approach.” *Use of Spectrum Bands above 24*

Contrary to Google's position here, and as Commissioner Rosenworcel aptly explained in an op-ed piece and in her recent Senate hearing testimony on the need for more productive use of spectrum, the government should *reward* enterprises that develop ways to use spectrum more innovatively and efficiently in order to create incentives for such innovation and efficiency.¹¹ In this case, Commissioner Rosenworcel's goals could be achieved even without supplying the kind of spectrum "reward" she described. Here, all the Commission needs to do is allow an existing licensed operator to use spectrum more intensively and flexibly, a fundamental policy that was a central component of the National Broadband Plan.¹²

GHz for Mobile Radio Services, Notice of Inquiry, 29 FCC Rcd 13020, at Statement of Chairman Tom Wheeler (2014) ("*24 GHz NOI*"); *see also id.* at Statement of Commissioner Mignon L. Clyburn (recognizing the need to "spur creative ideas for the best licensing and authorization blueprints on mobile operations above 24 GHz"); *Revision of Part 15 of the Commission's Rules to Permit Unlicensed National Information Infrastructure (U-NII) Devices in the 5 GHz Band*, First Report and Order, 29 FCC Rcd 4127, at Statement of Commissioner Jessica Rosenworcel, (2014) (recognizing the need for a variety of licensing schemes and policy approaches to support growth of the wireless broadband ecosystem); *24 GHz NOI* at Statement of Commissioner Michael O'Rielly (recognizing that the Notice of Inquiry must be open to a variety of possibilities because "no one in this room knows where it will eventually take us").

¹¹ *See* Marty Cooper and Jessica Rosenworcel, *Here's How to Expand Wireless Spectrum*, SAN JOSE MERCURY NEWS, Sept. 26, 2014, <https://www.fcc.gov/leadership/jessica-rosenworcel-editorials>; Statement of Commissioner Jessica Rosenworcel, FCC, Before the United States Senate Committee on Commerce, Science & Transportation, *Wireless Broadband and the Future of Spectrum Policy*, at 1-2 (July 29, 2015), <https://www.fcc.gov/document/rosenworcel-testimony-spectrum-policy-senate-commerce-hearing>.

¹² *See* Federal Communications Commission, *Connecting America: The National Broadband Plan*, at 79 (2010), <https://transition.fcc.gov/national-broadband-plan/national-broadband-plan.pdf> ("Creating ways to access spectrum under a variety of new models, including unlicensed uses, shared uses and opportunistic uses, increases opportunity for entrepreneurs and other new market entrants to develop wireless innovations that may not have otherwise been possible under licensed spectrum models."). *See also* Remarks of Commissioner Jessica Rosenworcel, 4G Americas Technology Briefing, Washington, DC, at 4-5 (Oct. 14, 2014), <https://www.fcc.gov/document/commissioner-rosenworcel-remarks-4g-americas-technology-briefing>:

I think it's time to leave behind the tired notion that we face a choice between licensed and unlicensed airwaves. Because good spectrum policy requires both.

Google attempts to justify its forced sharing regime by claiming that Globalstar would restrict its TLPS offering to a “miniscule number of Globalstar users.”¹³ Nothing could be further from the truth. As Google concedes, consumers will benefit dramatically from Channel 14 operations, which renders illogical any claim that Globalstar would seek to limit such benefits to a “tiny fraction” of consumers and thereby minimize the service’s commercial potential.¹⁴ The use of TLPS will not be limited to customers of Globalstar’s satellite services, but will instead be broadly available to consumers as described below.

While Google has been rewarded extraordinarily for its own innovation and ingenuity, it appears conveniently troubled by the fact that the public may actually have the opportunity and willingness to pay for a higher quality wireless service from another source. Yet, despite its position here, Google charges consumers for use of its own innovative service offerings such as Project-Fi and Google Fiber.¹⁵ In fact, unlike Project-Fi, Microsoft Wi-Fi, or a host of other differentiated Wi-Fi based and Wi-Fi First services, Globalstar reiterates that it has no plans to charge consumers directly for TLPS. Rather, Globalstar has consistently stated that, in order to maximize consumer utility of TLPS and thus its commercial value, it would enter into one or more partnerships with other companies to leverage both their existing investment in infrastructure and their customer base. Consumers may not need to be charged an extra fee for using TLPS at all; they may simply benefit from an improved mobile broadband experience when using a Globalstar partner’s client device or

... Earlier this year I had the privilege of being in Barcelona at the Mobile World Congress. I saw technologies that amaze. Cars that warn you even before they break down. Wearables that monitor your health down to the microsecond. Systems that monitor crops and predict problems with livestock. None of these technologies rely on a single spectrum band to function. Instead, they overcome spectral and physical challenges by moving from frequency to frequency, sometimes on spectrum that is licensed and sometimes on spectrum that is unlicensed.

So if we want to do big things, we need to take [a] page from this future. We should move beyond old dichotomies that pit licensed versus unlicensed spectrum. Because across the board we need to choose efficiency over inefficiency and speed over congestion – and we need to look at how more Wi-Fi can help us do it.

¹³ Google October 10 *Ex Parte* at 2.

¹⁴ *Id.* at 1.

¹⁵ Google has achieved annual revenues of \$70 billion and a market valuation of over \$400 billion. While Google may offer certain “free” services supported by advertising revenue, its network services such as Google Fiber have a business model that depends upon consumers being willing to pay for superior network performance.

Wi-Fi network.¹⁶ Moreover, as the Chicago deployment confirmed, users of all the non-overlapping Wi-Fi channels will be better off anywhere TLPS is deployed, since the availability of TLPS will spread users over 33% more spectrum at 2.4 GHz and thereby reduce existing Wi-Fi congestion.

Almost three years after Globalstar filed its petition, this proceeding appears to have come full circle – from claims that harmful interference from TLPS would threaten the basic Wi-Fi ecosystem to a realization that TLPS offers so much promise that this opportunity cannot be limited to the one “miniscule” company that developed it. With its latest filing, however, Google ignores the reality that TLPS as proposed in the *NPRM*¹⁷ represents the very kind of innovative, consumer-oriented service that the Commission has long encouraged and continues to seek. As Chairman Wheeler recently reiterated, “[C]ompetition is paramount. It is the best assurance of industry dynamism, that opportunities for improvements in quality and reductions in cost will be pursued assiduously, and that the benefits will be shared with consumers.”¹⁸

We urge the Commission to enable the dramatic 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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¹⁶ See Letter from Gary Griffiths, President and CEO, iPass, Inc., to Marlene H. Dortch, Secretary, FCC, IB Docket No. 13-213, at 1 (Sept. 14, 2015).

¹⁷ *Terrestrial Use of the 2473-2495 MHz Band for Low-Power Mobile Broadband Networks*, Notice of Proposed Rulemaking, 28 FCC Rcd 15351 (2013) (“*NPRM*”).

¹⁸ Prepared Remarks of FCC Chairman Tom Wheeler, The Brookings Institution, at 4 (June 26, 2015), <https://www.fcc.gov/document/remarks-fcc-chairman-tom-wheeler-brookings-institution>.