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July 16, 2015

VIA ELECTRONIC FILING

Marlene H. Dortch, Secretary
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, D.C. 20228

Re: IB Docket No. 13-213, RM-11685

Dear Ms. Dortch,

Since June 19th, 2015, Globalstar and their paid representatives have held eight meetings or phone calls with a total of 16 Commission staff members. In regards to unresolved technical issues in this proceeding, Globalstar repeats variants of the following:

- "We addressed interference claims and technical issues, noting that the March demonstration in the Commission's Technology Experience Center showed that Terrestrial Low Power Service was compatible with existing unlicensed operations." **- From Globalstar's June 23rd filing, with nearly identical wording in June 30th, July 7th, and July 10th filings**

- "We asked that the Commission reject the unsubstantiated technical and policy requests by these opponents – many of whom are potential competitors." - **- From Globalstar's June 23rd filing, with nearly identical wording in June 30th, July 7th, and July 10th filings**

- Globalstar's lobbyist first "urged the Commission to take advantage of", then "discussed the process by which" the TLPS proceeding could enable/stimulate "investment into new spectrum-based services and competition, based on sound engineering and compatible with existing services." **– From Blair Levin's (Globalstar lobbyist) July 6th and July 13th filings**

The first two quotes would have the Commission believe Globalstar's March 2015 demonstration provided conclusive evidence that TLPS will have no negative effect on existing services, and that technical issues raised by opponents are illegitimate. However, despite continually repeating the above claims over the last four months, Globalstar STILL has not addressed the following critical issues:

1. Unrealistically low TLPS traffic levels minimized the chances qualitatively "perceptible" problems would arise while quantitative measurements proved a material increase in interference with existing services. For example, at TLPS traffic levels less than 8% of total capacity[1], Bluetooth SIG hearing aid tests conclusively showed Bluetooth packet error rates doubled in the presence of TLPS[2]. While Globalstar may be correct stating there was "no perceptible degradation in audio quality"[3], they never explain why they prevented Bluetooth SIG from increasing TLPS traffic to more realistic levels, as requested.[4] It is important to realize the unrealistically low TLPS traffic levels also reduced the interference effect on Wi-Fi as well.

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[1] See Attachment to Letter from Gerst Capital, LLC to Marlene H. Dortch, Secretary, FCC, IB Docket 13-213 (April 14, 2014) "Analysis of Globalstar's TLPS Proposal", Slide 7
[2] See Attachment to Letter from Mark Powell, Executive Director, Bluetooth SIG, Inc. filed to the FCC's IB Docket 13-213 (March 20, 2014) "TLPS and Bluetooth Demonstrations FCC Technology Center – March 6, 2012", Section 2.1.2 on Page 5
[3] See Letter from Barbee Ponder to Marlene H. Dortch, Secretary, IB Docket 13-212 (March 18, 2015), Page 2
[4] See Letter from Mark Powell, Executive Director , Bluetooth SIG, Inc. filed to the FCC's IB Docket 13-213 (March 20, 2014) "Further Comments and Detailed report from TLPS & Bluetooth Demonstrations FCC Technology Center – March 6, 2015", Page 1

2. Contrary to Globalstar's claim the demonstration was held in a "quiet" RF environment[5], observations by the Bluetooth SIG and CableLabs indicate otherwise. The Bluetooth SIG noted they "…*did conduct some preliminary tests, during which there was too much inference in the demonstration room even without TLPS to hear clear audio. As a result, the Bluetooth SIG is suspicious of the conclusions from Globalstar's Bluetooth speaker test which supposedly showed clear audio quality considering the Bluetooth SIG's finding in a Bluetooth speaker test without TLPS was the audio quality was poor."*[6] Though Globalstar disputes the hearing aid tests, they fail to explain why an allegedly "quiet" RF environment would cause problems for the Bluetooth SIG's attempts to do wireless speaker tests. Notwithstanding the response of Globalstar's consultant[7], this lends further credence to CableLabs' allegations regarding the RF environment[8]. The combination of problems observed by numerous parties to this proceeding should preclude the Commission from relying on Globalstar's claim that the March demonstration conclusively showed TLPS is "compatible with existing unlicensed operations".

3. Though Globalstar claims ANY Wi-Fi capable device can be enabled for TLPS with only a "device firmware modification"[9], the Access Points used in the March demonstration contained hardware modifications relative to commercial versions with the same FCC ID.[10] Analysis shows it was necessary for Ruckus to remove a "coexistence filter" in order to allow for TLPS operation. Furthermore, the OET's May 7th, 2015 emissions report[11] implies the Commission is not aware this filter was removed, raising the question of whether they were appropriately informed. The undisclosed requirement for such a hardware change has implications for any LTE-enabled client device (i.e. smartphones). Failing to disclose this critical hardware change prevents all participants in this proceeding from

Furthermore, Globalstar seems to imply opponents' objections are illegitimate because they are "potential competitors". Globalstar would have the Commission believe that its own financial incentives and the incentives it provides to those arguing on their behalf are more meritorious than their opponents. I am confident the Commission is not this naive.

Regarding the final quote above, it is ironic that Globalstar's paid lobbyist, Blair Levinson, refers to "sound engineering" when a straightforward engineering analysis clearly raises doubts that TLPS will be "compatible with existing services".

More ironic is Dennis Roberson's involvement as Globalstar's paid consultant in this proceeding while chairing the Commission's Technical Advisory Council (TAC)[12]. In April, the TAC produced an excellent paper entitled *"A Quick Introduction to Risk-Informed Interference Assessment"*[13]. According to the executive summary, *"This short paper proposes the use of quantitative risk analysis to assess the harm that may be caused by changes in radio service rules."* In his capacity as a paid consultant to Globalstar,

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[5] See Letter from Regina Keeney to Marlene H. Dortch, Secretary, IB Docket 13-212 (March 12, 2015), Page 1.
[6] See Letter from Mark Powell, Executive Director , Bluetooth SIG, Inc. filed to the FCC's IB Docket 13-213 (March 20, 2014) "Further Comments and Detailed report from TLPS & Bluetooth Demonstrations FCC Technology Center – March 6, 2015", Page 2.
[7] See Attachment to Letter from Regina Keeney to Marlene H. Dortch, Secretary, FCC, IB Docket 13-213 (April 23, 2014) "DECLARATION OF KENNETH J. ZDUNEK, Ph.D.", Paragraph 16.
[8] See Letter from Paul Margie, Counsel to the National Cable & Telecommunications Association (NCTA) to Marlene H. Dortch, Secretary, FCC, IB Docket 13-213 (April 16, 2014), Page 4.
[9] See Attachment to "Petition for Rulemaking of Globalstar, Inc." (November 13, 2012) "Technical Analysis of Terrestrial Low Power Services (TLPS) For Globalstar Petition for Rulemaking", Page 3.
[10] See Attachment to Letter from Gerst Capital, LLC to Marlene H. Dortch, Secretary, FCC, IB Docket 13-213 (May 14, 2014) "Analysis of FCC's 'ELECTROMAGNETIC EMISSIONS CHARACTERIZATION OF SAMPLES USED AT TLPS DEMONSTRATION' ".
[11] See "ELECTROMAGNETIC EMISSIONS CHARATERIZATION OF SAMPLES USED AT TLPS DEMONSTRATION", Report TR 15-1002, IB Docket 13-213 (May 7, 2015).
[12] https://www.fcc.gov/events/technological-advisory-council-meeting-june-11th-2015
[13] https://transition.fcc.gov/bureaus/oet/tac/tacdocs/meeting4115/Intro-to-RIA-v100.pdf

Mr. Roberson would have the Commission rely on the fact that TLPS had no "*qualitative impact*"[14] on Bluetooth, while ignoring the *quantitative* negative impact proven by the Bluetooth SIG report[15].

Due to Globalstar's unwillingness to substantively address legitimate technical issues raised by opponents, and its refusal to participate in system-level testing with others in this proceeding, the Commission lacks sufficient information to make an informed decision. With only the information currently available in this proceeding's record, I believe the Commission should not go forward to authorize Globalstar to deploy TLPS.

Pursuant to Section 1.1206(b)(2) of the Commission's rules, an electronic copy of this letter and attachments are being filed for inclusion in the above-referenced dockets.

Respectfully Submitted,

Greg Gerst
Gerst Capital, LLC

cc: Ruth Milkman
David Strickland
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Patrick Forster
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Troy Tanner
Jennifer Gilsenan
Karl Kensinger
Robert Nelson
Lynne Montgomery
Chip Fleming
Patrick Donovan
Stephen Buenzow

[14] See Letter from Regina Keeney to Marlene H. Dortch, Secretary, IB Docket 13-212 (March 13, 2015), Page 2.
[15] See Attachment to Letter from Mark Powell, Executive Director, Bluetooth SIG, Inc. filed to the FCC's IB Docket 13-213 (March 20, 2014) "TLPS and Bluetooth Demonstrations FCC Technology Center – March 6, 2012", Section 2.1.2 on Page 5.