



Gerst Capital Challenges Globalstar: Prove TLPS Will Work On iPhone 6 (Apple Filings Say No)

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Disclosure: The author is short GSAT. The author wrote this article themselves, and it expresses their own opinions. The author is not receiving compensation for it. The author has no business relationship with any company whose stock is mentioned in this article.

Summary

- After labeling author's analysis "retarded", Globalstar doubles down on technically dubious TLPS claims.
- FCC Ex Parte filings highlight Globalstar's unwillingness to address concerns regarding TLPS in a transparent and technically thorough manner.
- Gerst Capital invites Globalstar to conduct a public debate on all technical issues surrounding TLPS.

Despite Apple (NASDAQ:[AAPL](#)) test results from an FCC accredited lab showing the opposite, Globalstar, Inc. (NYSEMKT:[GSAT](#)) insists that its proposed TLPS will work on iPhone 6/6 Plus, but provides no evidence to support this claim. This is yet another example of Globalstar failing to provide technical details to substantiate its claims. Furthermore, Globalstar has glaringly excluded all smartphones with co-existence filters from public tests while continuing to claim that software changes can remedy a hardware problem.

In response to these claims, we've written an open letter to James Monroe, CEO of Globalstar, regarding his comments made on a conference call hosted by Odeon Capital Group on February 12th, 2015.

Dear Mr. Monroe,

It is my understanding you took issue with [an article I published on February 12th](#) which demonstrated, based on analysis from an FCC accredited test lab, that Globalstar's proposed TLPS will not work on Apple's iPhone 6/iPhone 6+ and is unlikely to work on many other popular smartphone models. On a call hosted by Odeon Capital only a few hours after publication, at least one attendee quoted you as saying my analysis was - as you allegedly put it - "retarded." Secondhand accounts of your comments imply you view my technical analysis to be illegitimate.

Transparent answers to the following questions could prove you right, and invalidate virtually every technical argument I've made so far.

1. Do you have evidence to support your claim that TLPS works for the iPhone 6? Or for other LTE-capable smartphones? Why are smartphones with co-existence filters glaringly absent from all tests planned by Globalstar and Jarvinian?

After repeated requests to Odeon, we still do not have access to the call recording. For this reason, we are still not sure whether you stated TLPS "does work" or "will work" on the iPhone 6. I will address the issue both ways:

If you meant the iPhone 6 "does work" on TLPS, then all of the following MUST BE TRUE:

- Globalstar already conducted iPhone 6 tests in a shielded RF environment (anechoic chamber) because none of your FCC field trial applications includes the iPhone 6 or any other smartphone.

- Apple (or an extremely competent hacker) provided a special build of iOS software that supports 802.11n operation on Wi-Fi channel 14. FCC rules prevent publicly available software to allow for transmission outside channels 1-11. Furthermore, there is no regulatory regime on the planet that allows 802.11n operation on channel 14.
- After configuring the iPhone 6 for 802.11n on channel 14, testing included spectrum analyzer measurements to assure, among other things, the frequency domain of the 802.11n signal is not materially impaired. After all, the iPhone 6 FCC test report clearly shows the channel 13 frequency envelope is materially impaired. If I were you, I would be very concerned how much worse Channel 14 looks.

Has Globalstar validated TLPS operation on the iPhone 6 through actual testing?

If so, you only need to provide a single piece of evidence: A spectrum analyzer plot showing the iPhone 6 transmitting an 802.11n signal on Channel 14. If the plot shows no material impairment, then you're right, and my analysis is illegitimate.

If you meant the iPhone 6 "will work" on TLPS, then all of the following MUST BE TRUE:

- Globalstar obtained permission from Avago (NASDAQ:[AVGO](#)) and Apple to view the iPhone 6's proprietary filter specification since it is covered by an NDA between the two companies. Given Apple's penchant for secrecy, this would be an amazing accomplishment, and a very positive indicator of Apple's disposition towards your TLPS proposal.
- After obtaining permission, Globalstar engineers reviewed the detailed insertion loss data (likely via an "s2p file"), and verified the iPhone 6 coexistence filter will not materially impair an 802.11n signal transmitted on Wi-Fi channel 14. Given publicly filed FCC test data shows material impairment on channel 13, it would be miraculous if the filter reverses any impairment on 14 (or even indicates no further impairment beyond what the test data shows on 13).

Was Globalstar able to view the proprietary iPhone 6 coexistence filter specification and technically validate TLPS will function on par with free Wi-Fi on channels 1-11? Or even function at all?

2. How did I "cherry-pick" data in my analysis?

According to a summary from at least one call attendee, you alleged that my analysis consisted of "cherry-picked" data. Naturally, this implies I failed to include available data that would either weaken or invalidate my conclusions.

My key contentions center around the impact coexistence filters will have on TLPS. As my article states, Wi-Fi only devices such as the Surface Pro 3 are unlikely to have a problem operating on channel 14. In regards to "client devices," coexistence filters are found only where a single device contains both Wi-Fi and 4G/LTE capability.

If data is available elsewhere in the iPhone 6 FCC test report to diminish or demolish my case, where is it?

One issue you could raise is that, due to limits required at 2483.5MHz (see section 10 of the test report), Apple was forced to severely reduce channel 13's transmit power level during the band-edge tests highlighted in my article. However, issues I identify have nothing to do with achievable average in-channel power levels.

(An unexplored, but possible, issue is whether some or all of the current Part 15 emissions levels imposed at 2483.5MHz will simply be moved to 2495MHz. If they are, then you better take a look at the 15dB power reduction on Channel 13 vs. Channel 6 in the iPhone 6 test report. Your proposal will be DOA if the FCC simply transfers existing 2483.5MHz emissions limits to 2495MHz.)

3. The Ruckus 7982 AP Test report indicates it has a coexistence filter. Did the Ruckus AP used in your earlier trial have a coexistence filter? If so, did Globalstar require Ruckus to remove the filter for the trial?

Referring to my article published on February 12th, figure 13 presents the "Authorized Band Edge Test" on channel 11 from the Ruckus 7982 Access Point FCC test report. The plot implies this device has a coexistence filter.

Will Globalstar require Ruckus to make ANY hardware changes to the commercially available 7982 AP for any TLPS trial? If so, will the "designed-in" coexistence filter be changed in any way?

Furthermore, did Ruckus remove the coexistence filter in any AP used in any prior TLPS trial?

4. Does the self-proclaimed "inventor of TLPS" have more than one year of formal engineering education?

According to degreeverify.org, Globalstar's leading technical expert on TLPS attended a single year of engineering school, but never graduated college with a degree of any kind. It is entirely possible this person received a degree from another accredited university that I'm not aware of. If so, my apologies to you (and him) for even asking the question.

There are many successful, exceptionally intelligent people without college degrees. However, it seems extremely risky for the CEO of a public company to engage a person with so little formal engineering education to lead the conception and trial of such a complex technical proposal.

A brief scan of past ex parte filings shows this is not the first time you have failed to provide technical justification for your TLPS claims.

"The OTI and PK representatives mentioned their understanding that Globalstar has repeatedly refused overtures by Wi-Fi stakeholders to conduct cooperative and transparent testing"

- Open Technology Institute, FCC Notice of Ex Parte 2/13/2015

"Sprint's predecessor indicated its concern with the **lack of technical information** provided in the Petition.... Sprint is still concerned about the lack of technical specifications that have been provided on the record. "

- Sprint Corporation, FCC Notice of Ex Parte, 5/5/2014

"**Globalstar has provided little useful information** upon which the impact of its proposed service could be assessed and that there remain serious questions about how a TLPS would be managed and controlled"

- Wi-Fi Alliance, FCC Notice of Ex Parte 11/3/2014

"Before a determination can be made that Globalstar's proposed system can go forward, thorough testing must be conducted by a truly independent testing authority, utilizing a significant and diverse test bed. It is respectfully submitted that **testing conducted by Globalstar or its contractors is not sufficient,**"

- Alarm Industry Communications Committee, FCC Notice of Ex Parte 5/5/2014

"Purported test results in the record are at best inadequate and inconclusive. The **Jarvinian testing commissioned by Globalstar is cloaked in secrecy**, since Globalstar provided only summary results with no description of test conditions or observations by interested parties."

- **Open Technology Institute and WISPA, FCC Notice of Ex Parte 1/8/2015**

"The Commission...should not rely on Globalstar's technical assertions regarding the impact on Wi-Fi, because Globalstar has not shared its underlying test results"

- **National Cable & Telecommunications Association, FCC Notice of Ex Parte 12/18/2014**

"**Globalstar technical analysis and test data summary are insufficient** for interested stakeholders to assess the impact of TLPS operations on their services."

- **Bluetooth SIG, FCC Notice of Ex Parte 6/3/2014**

You seem like a genuinely nice person, and I often wonder if your TLPS claims are simply due to poor technical guidance. It is hard to imagine anyone making such claims if they really understood the shaky technical ground upon which they're based.

I would welcome the opportunity to sit down with your technical experts, walk through my analysis, and listen to theirs. For the sake of transparency, I recommend such an event be open to the public.

Sincerely,

Greg Gerst

Gerst Capital, LLC