

January 20, 2016

EX PARTE NOTICE VIA ECFS

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: WT Docket No. 12-40: *Amendment of Parts 1 and 22 of the Commission's Rules with Regard to the Cellular Service, Including Changes in Licensing of Unserved Areas*;

WT Docket No. 15-300: *Wireless Telecommunications Bureau Seeks Comment on AT&T Request for Waiver to Permit Power Spectral Density Model for 800 MHz Cellular Operations in Eight Markets in Kentucky and Tennessee*;

GN Docket No. 13-114, RM-11640: *Expanding Access to Broadband and Encouraging Innovation through Establishment of an Air-Ground Mobile Broadband Secondary Service for Passengers Aboard Aircraft in the 14.0-14.5 GHz Band*

Dear Ms. Dortch:

On January 15, 2016, representatives of Gogo Inc. met with members of the Federal Communications Commission's Wireless Telecommunications Bureau (the "Bureau"), Office of Engineering and Technology, and Public Safety and Homeland Security Bureau to discuss recent submissions in the first two dockets referenced above.¹

During the meeting, Gogo explained that adoption of the power spectral density ("PSD") proposal for operations in the cellular band would increase the risk of out-of-band emission ("OOBE") interference to its operations in the neighboring 800 MHz Air-to-Ground ("ATG") band. Gogo therefore urged the Bureau to mitigate that risk by (1) requiring cellular licensees to enter into inter-operator interference mitigation agreements or otherwise coordinate with adjacent channel licensees such as Gogo prior to commencing any operations at higher power levels than currently allowed by rule, and (2) adopting more stringent OOBE limits on cellular operations near 800 MHz ATG base stations.

Gogo noted that PSD limits of 250 watts/megahertz in non-rural areas and 500 watts/megahertz in rural areas will facilitate the deployment of wider band technologies such as LTE in the cellular band. But wideband LTE carriers generally have stronger out-of-band emissions than narrower GSM or CDMA carriers and therefore pose a greater risk of interference. Further, the stronger out-of-band

¹ A list of the attendees is included in Attachment A.

emissions of wider carriers coupled with increased in-band power would inevitably lead to even greater out-of-band power, and spectral regrowth for LTE emissions can occur far outside the band edge.²

Gogo explained that providing the requested protective measures would not impose a significant burden on cellular operators. As Gogo has explained in past filings, its proposals would require only a small fraction of the nation's cellular base stations (*i.e.*, those operating in close geographic proximity to a Gogo ATG base station) to comply with more stringent OOB limits.³ Gogo provides nationwide service with just over 200 ATG base stations and the company does not anticipate significantly increasing that number in the near future. Therefore, cellular operations in a very small area, nationwide, would be subject to the more stringent OOB restrictions.

During the meeting, Gogo also discussed some potentially misleading claims recently made by AT&T in support of AT&T's Petition for Waiver of the FCC's rules.⁴ Contrary to AT&T's assertions, if the FCC grants the Petition, AT&T would operate at power levels higher than currently allowed under the rules. Specifically, if AT&T was to deploy a five megahertz LTE carrier in the cellular band tomorrow, its power limit would be 100 watts/megahertz. But AT&T is seeking to deploy five megahertz LTE carriers at a maximum power of 500 watts/megahertz, a five-fold increase over the current limits. AT&T's sophistry relies on an apples-to-oranges comparison which analogizes narrow-band GSM operations, which pose little threat of OOB interference, to wide-band LTE operations.⁵ As Gogo explained during the meeting, narrow-band technologies such as GSM have much sharper "roll-off" than wider-band technologies, and thus produce much lower out-of-band emissions.

Gogo also explained that it is primarily concerned with the increased risk of harmful interference, which will inevitably result from grant of PSD power limits in the cellular band. AT&T has attempted to side-step this issue by implying that Gogo is seeking relief to currently existing interference.⁶ But AT&T is incorrect. Gogo is working with AT&T and other cellular licensees outside of this proceeding to address interference as it occurs. Gogo has discussed already documented cellular interference only to highlight that the FCC's current cellular rules are at times inadequate to protect ATG operations and that interference would necessarily increase if the Commission adopts higher PSD power limits. Despite AT&T's claims to the contrary, the heightened risk of interference to

² See Letter from Michele Farquhar, Counsel to Gogo Inc. to Marlene H. Dortch, Secretary, FCC, WT Docket No. 12-40 (filed Dec. 24, 2015).

³ *Id.* at 6.

⁴ See Reply Comments of AT&T, WT Docket No. 15-300 at 4-5 (filed Jan. 11, 2016) ("AT&T Letter"); see also AT&T Services, Inc., Petition for Waiver for Licenses in Kentucky and Tennessee, WT Docket No. 15-300 (filed Dec. 1, 2015).

⁵ See AT&T Letter at 4. It is irrelevant that 12 GSM carriers can operate at aggregate power levels of 6000 watts under the current rules because, as explained above, interference to Gogo base stations is caused by out-of-band power, not in-band power, and narrowband GSM carriers pose little risk of OOB interference.

⁶ *Id.* at 5.

adjacent-channel licensees posed by cellular PSD power limits is clearly within the scope of both the rulemaking proceeding and the AT&T waiver proceeding.

Finally, Gogo urged the Bureau to promptly allocate and auction spectrum for the proposed 14 GHz Air-Ground Mobile Broadband Service.⁷ Gogo needs additional spectrum capacity to reliably provide the in-flight broadband and other communications services that consumers expect and demand. The establishment of another in-flight service allocation would not introduce any new risks to national security or air safety.

Pursuant to Section 1.1206(b)(2) of the Commission's rules, an electronic copy of this letter is being filed in the above-referenced dockets. Please direct any questions regarding this filing to me.

Respectfully submitted,

/s/ Michele C. Farquhar

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Washington, DC 20004

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cc: Attendees listed in Attachment A

⁷ See *Expanding Access to Broadband and Encouraging Innovation through Establishment of an AirGround Mobile Broadband Secondary Service for Passengers Aboard Aircraft in the 14.0-14.5 GHz Band*, Notice of Proposed Rulemaking, 28 FCC Rcd 6765 (2013).

Attachment A – List of Meeting Attendees

FCC ATTENDEES:

Wireless Telecommunication Bureau

Front Office:

Jean Kiddoo, Deputy Bureau Chief

Chris Helzer, Chief Engineer

Mobility Division:

Roger Noel, Chief

Thomas Derenge, Deputy Chief (engineer) (by telephone)

Lloyd Coward, Deputy Chief (legal)

Moslem Sawez, Technical Advisor (engineer) (by telephone)

Keith Harper, Associate Chief (engineer) (by telephone)

Nina Shafran, Senior Attorney

Heather Moelter, Attorney

Office of Engineering and Technology

Policy and Rules Division

Michael Ha, Deputy Chief (by telephone)

Public Safety and Homeland Security Bureau

Policy and Licensing Division

Michael Wilhelm, Deputy Chief

GOGO ATTENDEES:

Gogo Inc.

Bill Gordon

Yong Liu (engineer)

Dan Thompson (engineer)

Hogan Lovells US LLP

Michele Farquhar

Tom Peters (engineer)