

BEFORE THE
Federal Communications Commission
WASHINGTON, D.C. 20554

In re: the Matters of)	
)	
Amendment of the Commission's Rules)	
To Establish a Next-Generation Air Ground)	RM-11640
Service on a Secondary Licensed Basis in the)	
14.0 to 14.5 GHz Band)	
)	
Service Rules and Procedures to Govern the)	
Use of Aeronautical Mobile Satellite Service)	IB Docket No. 05-20
Earth Stations in Frequency Bands Allocated to)	
The Fixed Satellite Service)	
)	
Utilities Telecom Council and Winchester)	
Cator, LLC Petition for Rule Making)	RM-11429
To Establish Governing Critical Infrastructure)	
Industry Fixed Service Operations in the)	
14.0 to 14.5 GHz Band)	
)	
To: Secretary, Federal Communications Commission		
Attn: The Commission		

REPLY COMMENTS OF ROW 44, INC.

Row 44, Inc. ("Row 44"), by counsel and pursuant to Section 1.405(b) of the Commission's Rules (47 C.F.R. § 1.405(b)), hereby replies to comments submitted in response to the Petition for Rule Making ("Petition") filed by Qualcomm Incorporated ("Qualcomm") and placed on Public Notice by the Commission on August 30, 2011.¹ Qualcomm has sought initiation of a proceeding to amend the Commission's Rules to allow shared, secondary operation of a new air-to-ground ("ATG") communications service in the 14.0-14.5 GHz Fixed-Satellite Service ("FSS") band.

¹ See *Consumer & Governmental Affairs Bureau, Reference Information Center, Petition for Rulemaking Filed*, Report No. 2933 (August 30, 2011).

In response to the Commission's Public Notice, a handful of parties have filed comments, most raising significant concerns about the Qualcomm proposal. Indeed, only one formal participant in the proceeding, GoGo, Inc. ("GoGo"), the principal customer for Qualcomm's existing ATG service technology, has expressed substantial support for the proposal.²

Yet even GoGo's comments raise significant questions regarding its own commitment to large-scale provision of in-flight broadband services using terrestrial ATG technology. Specifically, GoGo indicates that it is moving toward relying on Ka-band satellite technology for the delivery of broadband services on board aircraft, but notes that "satellite may not *always* provide the best solution for *all* aircraft and *all* customers."³ This implied future reliance on satellite-delivered services to meet the needs of GoGo's primary airline customers suggests that its remaining terrestrial service is expected to serve more as an adjunct for niche customers than as a primary means of broadband service delivery. This raises the question whether an additional spectrum allocation for ATG service is really needed even for GoGo's expressed purposes.

Also relevant is the relative lack of comment by other potential ATG service or technology providers. Other than the Petitioner and GoGo, only Alcatel-Lucent has filed comments expressing direct support for a new proceeding on ATG service, but it does not endorse the specifics of Qualcomm's proposal, instead it argues that any such proceeding, if commenced, should examine the use of *alternative* spectrum bands and technologies *different*

² Brief supporting letters were also filed by American Airlines, United Airlines, and Virgin America, Inc., all customers GoGo's using its current ATG implementation. Qualcomm also filed comments on its Petition, but these simply recapitulate themes already advanced in the Petition itself without providing new information to support the proposal.

³ GoGo Comments at 4 (emphases added).

from Qualcomm's. Alcatel-Lucent raises many issues with the Qualcomm model, including the following:

- The need for investigation of alternative frequency bands such as the Ka-band and frequency bands that could be harmonized with existing European allocations, *e.g.*, the 2 GHz band.⁴
- The concern that authorization of a new service based on a unique technical solution, such as Qualcomm's, could stifle competition by locking in a specific technological approach and inhibiting deployment of current and evolving techniques, such as LTE.⁵
- The absence of consideration in Qualcomm's technical showing of emissions from aircraft transmitters that may reflect off bodies of water and flat land areas in ways that increase potential interference into the geostationary satellite orbital arc.⁶

Arrayed against the relatively small number of parties advocating a new ATG service are a broader range of satellite service providers operating in the Ku-band, as well as users of these services.⁷ These commenters have raised many other salient concerns, including:

- The need to resolve in advance of any new rulemaking proceeding concerning the Ku-band the long-pending aeronautical mobile-satellite service ("AMSS") rules proceeding concerning that frequency band.⁸
- The requirement for careful evaluation, encompassing both actual measurement and expert analysis, to address the appropriate metrics for consideration of increased interference to existing licensed users, including consideration of the impact of increased numbers of aircraft, the actual number of ground stations necessary to

⁴ See Alcatel-Lucent Comments at 1, 4 & 6.

⁵ See Alcatel-Lucent Comments at 5 & 6-7. See also Panasonic Avionics Comments at 3-4; Row 44 Comments at 7.

⁶ See Alcatel-Lucent Comments at 5.

⁷ See Comments filed by the American Petroleum Institute ("API"), the Boeing Company ("Boeing"), Panasonic Avionics Corporation ("Panasonic Avionics"), Row 44, Inc. ("Row 44"), and the Satellite Industry Association ("SIA"), a broad industry group that includes a host of major corporations.

⁸ See Boeing Comments at 4-6; Panasonic Avionics Comments at 6; Row 44 Comments at 2-4; and SIA Comments at 9-10.

provide nationwide service, and the impact of both in-flight and ground station antenna mispointing.⁹

- The absence of any explanation of how the proposed ATG would be able to tolerate potential interference from primary fixed Ku-band Earth station deployments near ATG ground stations and increasingly ubiquitous mobile VSAT operations, including Earth stations on vessels and vehicle-mounted Earth stations.¹⁰

Conclusion

In light of all of the foregoing considerations, Row 44 continues to believe that Qualcomm has failed to make a sufficient showing of need for the Commission to initiate what would be a far more complex consideration of possible rules for next generation ATG service implementation than Qualcomm has contemplated in its Petition. At this juncture, on the record established by the comments, the most that the Commission could reasonably consider is issuance of a notice of inquiry on ATG service generally, seeking broader input on whether there is any need for additional ATG spectrum and the potential technologies that may be available to implement various proposals for next generation service.

Respectfully submitted,

Row 44, Inc.

By: /s/ David S. Keir
David S. Keir

Lerman Senter PLLC
2000 K Street, NW, Suite 600
Washington, DC 20006-1809
(202) 429-8970

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Its Attorney

⁹ See API Comments at 1-2; Boeing Comments at 2-3; Row 44 Comments at 5-7; and SIA Comments at 7. See also Alcatel-Lucent Comments at 5 & 6.

¹⁰ See Boeing Comments at 3; Panasonic Avionics at 4-5; and SIA Comments at 8.

CERTIFICATE OF SERVICE

I, Sharon A. Krantzman, do hereby certify that on this 14th day of October, 2011, I sent via first class, postage prepaid mail, a copy of the foregoing "Reply Comments of Row 44, Inc." to each of the following:

Dean R. Brenner, Vice President, Government Affairs
John W. Kuzin, Senior Director, Regulatory
Qualcomm Inc.
1730 Pennsylvania Avenue, NW
Suite 850
Washington, DC 20006

Henry Goldberg, Esq.
Jonathan Wiener, Esq.
Devendra T. Kumar, Esq.
Goldberg, Godles, Wiener & Wright
1229 19th Street, NW
Washington, DC 20036
Counsel to Winchester Cator, LLC

Michael Oldak, Esq.
Vice President and General Counsel
Utilities Telecom Council
1901 Pennsylvania Avenue, NW
Fifth Floor
Washington, DC 20006

William J. Gordon
GoGo Inc.
Vice President for Regulatory Affairs
Suite 300
1725 I Street, NW
Washington, DC 20006

Michele C. Farquhar, Esquire
David Martin, Esquire
Christopher J. Termini, Esquire
Hogan Lovells US LLP
555 13th Street, NW
Washington, DC 20554
Counsel to GoGo Inc.

Jeffrey A. Marks, Esquire
Alcatel-Lucent
Suite 640 West Tower
1100 New York Avenue, NW
Washington, DC 20005

Patricia A. Cooper, President
Satellite Industry Association
Suite 1001
1200 18th Street, NW
Washington, DC 20036

Carlos M. Nalda, Esquire
Mark D. Johnson, Esquire
Squire Sanders & Dempsey
Suite 300
1200 19th Street, NW
Washington, DC 20036
Counsel to Panasonic Avionics Corp.

Bruce A. Olcott, Esquire
Squire Sanders & Dempsey
Suite 300
1200 19th Street, NW
Washington, DC 20036
Counsel to The Boeing Company

Audrey L. Allison, Director
Frequency Management Services
The Boeing Company
1200 Wilson Boulevard
Arlington, VA 22209

Jack Richards, Esquire
Greg Kunkle, Esquire
Keller & Heckman
Suite 500 West
1001 G Street, NW
Washington, DC 20001
Counsel to the American Petroleum Institute

Robert J. Friedman
Vice President, Marketing
American Airlines
P.O. Box 619616
Dallas/Ft. Worth Airport, TX 75261

Captain Joseph D. Burns
Managing Director
Technology and Flight Test
FAA Director of Operations
United Airlines
233 South Wacker Drive
Chicago, IL 60606

John J. Varley, Esquire
Virgin America Inc.
Suite 450
555 Airport Boulevard
Burlingame, CA 94010-2056

/s/ Sharon A. Krantzman

Sharon A. Krantzman