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April 26, 2018

VIA ELECTRONIC FILING

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

Re: Viasat, Inc. *Ex Parte* Response to Iridium, IB Docket No. 17-95

Dear Ms. Dortch:

Viasat, Inc. (“Viasat”) responds to the *ex parte* letter filed by Iridium Communications, Inc. (“Iridium”) on April 11, 2018, which continues to urge the Commission to preclude ESIMs from sharing 50 MHz of the spectrum that Iridium uses in limited geographic areas in the United States.

Viasat’s analysis shows that Iridium’s NGSO MSS Ka band spectrum assignment is 100 percent underutilized in 100 percent of the United States.¹ This is the case because it is possible for Viasat’s ESIM technology to be used to provide broadband service on airplanes in the immediate vicinity of an Iridium gateway over a single GSO spacecraft and with no impairment to the Iridium network.² As the Commission is well aware, major airlines have endorsed the need for additional spectrum for in-flight broadband.³ In contrast, providing Iridium continued exclusive use of this spectrum would render unavailable valuable capacity that would enable thousands of airline passengers to stream video while flying across America.

¹ Viasat’s previously submitted analyses showing that its ESIM technology can operate in close proximity to an Iridium feeder link station on a co-frequency, co-coverage basis. *See* Viasat, Inc., *Ex Parte* Submission, IB Docket No. 17-95, Annex 1 (filed Mar. 26, 2018) (“Viasat March 26 *Ex Parte*”) (providing a simulation and analysis of multiple ESIMs operating within multiple GSO networks in close proximity and in some cases directly over Iridium’s feeder link station); *see also* Viasat, Inc., Notice of *Ex Parte* Presentation, IB Docket No. 17-95 (filed Feb. 5, 2018); Viasat, Inc., Inmarsat, Inc., Notice of *Ex Parte* Presentation, IB Docket No. 17-95, Attachment at 2 (filed Nov. 6, 2017).

² *See* Viasat March 26 *Ex Parte* at Annex 1.

³ *See* American Airlines, *Ex Parte* Presentation, GN Docket No. 14-177, *et al.* (filed Nov. 9, 2017); JetBlue Airways, *Ex Parte* Presentation, GN Docket No. 14-177, *et al.* (filed Nov. 9, 2017) (both attached here).

More specifically, enabling ESIMs to share the 50 MHz of spectrum at 29.25-29.3 GHz would facilitate more efficient use of the spectrum than is occurring today by enabling use of various-sized channel carriers throughout the entire 29.25-30 GHz range. The attached sample channel spacing plots illustrate how providing ESIMs shared access to 29.25-29.3 GHz would enable the use of wider bandwidth carriers that otherwise would be unavailable, and would avoid fragmentation inefficiencies from smaller bandwidth carriers. Because ESIMs operate within the same satellite network alongside fixed user terminals, both types of earth stations would be able to use the same channels and carriers if the available spectrum were aligned.

Coupled with the ability to reuse that spectrum on multiple beams on a number of different high-throughput satellite networks with U.S. coverage, allowing ESIMs access to this 50 MHz would unleash additional capacity sufficient to serve the equivalent of 250,000 users streaming video at currently provisioned rates. Therefore, providing ESIMs shared access to this 50 MHz of spectrum is instrumental to connecting Americans when they travel in the air and facilitating more efficient use of the spectrum overall, with no offsetting harm.

Respectfully submitted,

/s/

John P. Janka
Elizabeth R. Park

Attachments

cc: Rachael Bender
Louis Peraertz
Erin McGrath
Umair Javed
Will Adams
Thomas Sullivan
Troy Tanner
Jennifer Gilsenan
Jose Albuquerque
Chip Fleming
Cindy Spiers
Kathryn Medley
Diane Garfield
Joseph Hill
Sankar Persaud
Paul Blais
Michael Mullinix

Sample Channel Spacing Plans

Figure 1 and Figure 2 below present two notional carrier allocation plans, one where the 50 MHz is available and one where it is not.

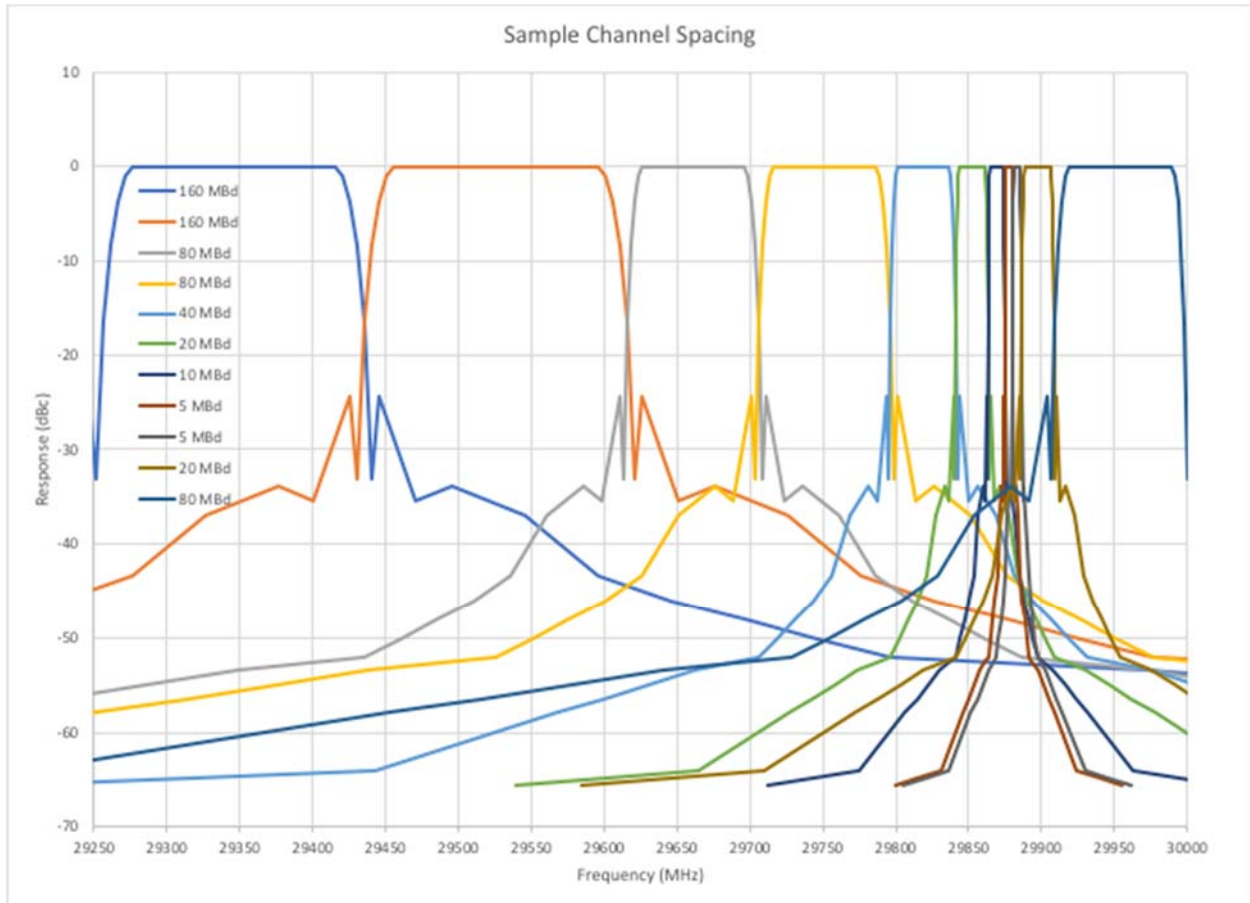


Figure 1 – Notional carrier plan with access to 29.25 – 29.3 GHz

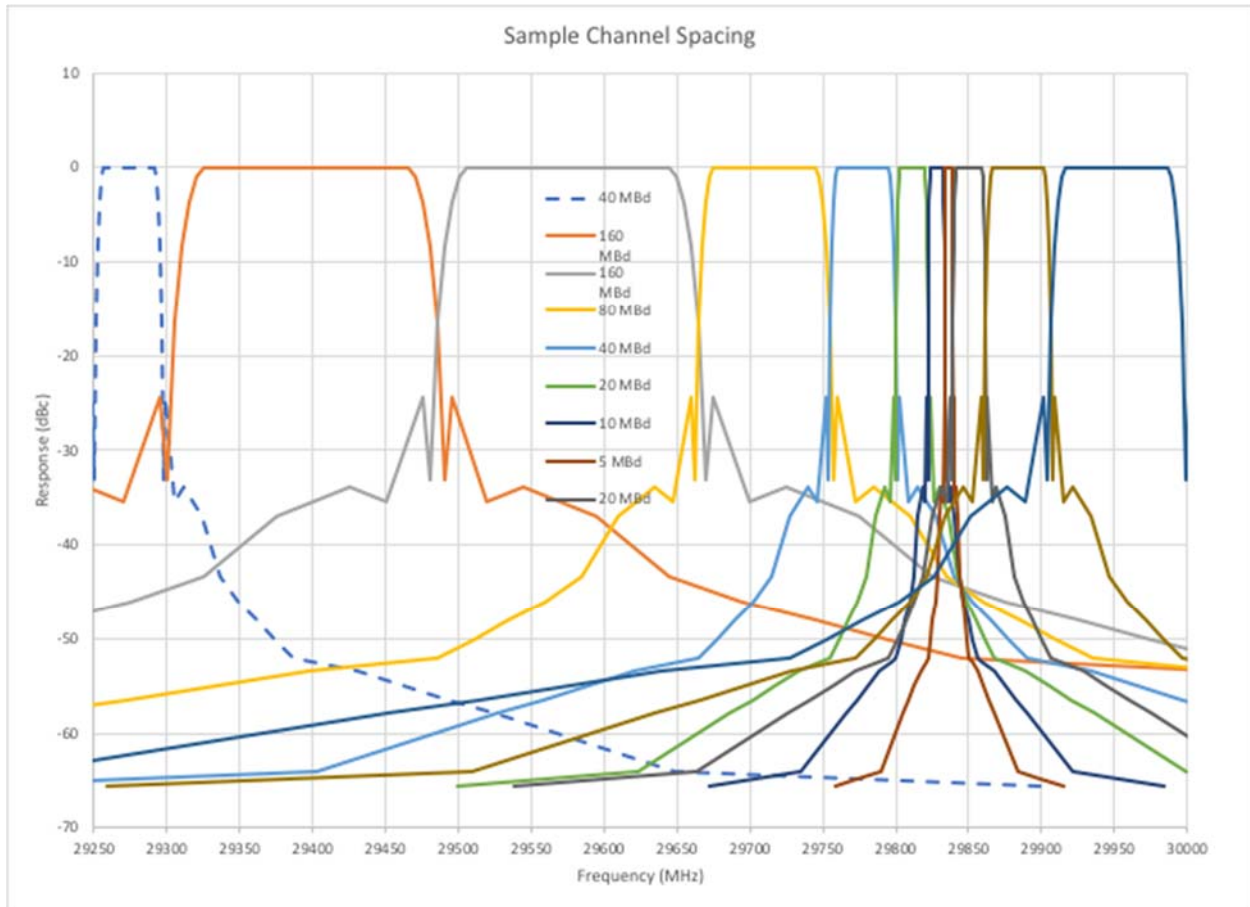


Figure 2 – Notional carrier plan without access to 29.25 – 29.3 GHz

In the case of Figure 2 where the 29.25 – 29.3 GHz band is not available, the total throughput is reduced by 11% over that achieved by the plan in Figure 1. Essentially, the additional throughput results because no roll-off is required for the upper side of the carrier occupying the 29.25-29.3 GHz band because it becomes part of the next carrier in the band, and effectively 45 MBd is usable as a result.

November 9, 2017

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

Re: *Ex Parte* Presentation, GN Docket No. 14-177; IB Docket Nos. 15-256 & 97-95;
RM-11664; and WT Docket No. 10-112

Dear Ms. Dortch:

American Airlines files this *ex parte* letter to express support for continued primary satellite access to the long-designated satellite service frequency bands in the Q/V bands (40-42/48.2-50.2 GHz), as well as flexible satellite broadband access in the other parts of the Q/V bands designated for terrestrial use. As in-flight broadband demand grows, as explained below, American Airlines and our satellite broadband partners will need access to more spectrum, just like terrestrial providers, to meet consumer demand.

American Airlines is the world's largest airline, employing more than 120,000 team members and offering 6,700 flights per day to 350 destinations in more than 50 countries. Last year, we carried 198,714,575 passengers, with an average of nearly 545,000 passengers per day who travel on American Airlines. American Airlines currently operates over 1200 connected aircraft and has plans to equip over 600 of those aircraft with satellite connectivity within the next two years.

American Airlines relies on services from satellite companies, like ViaSat, and other providers, to enable us to offer the connectivity that our passengers increasingly demand. It is important to American that there are choices for such services, as this ensures that we can always provide the best product at the most attractive prices for our onboard customers. Similarly, we expect that the demand for cost-effective and reliable airborne broadband service will continue to increase. This growth will demand more and more bandwidth for higher speeds and data throughput requirements in the cabin, and for this to occur, it is necessary for our wifi providers to have continued primary and flexible access to the Q/V bands to meet growing demand.

We urge the Commission to take adequate steps to ensure that our passengers continue to have airborne access to cost-effective, reliable and fast broadband through our satellite partners.

Sincerely,



John Beavers





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November 9, 2017

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

Re: Ex Parte Presentation, GN Docket No. 14-177; IB Docket Nos. 15-256 & 97-95; RM-11664; and WT Docket No. 10-112

Dear Ms. Dortch:

JetBlue Airways files this ex parte letter to express support for continued primary satellite access to the long-designated satellite service frequency bands in the Q/V bands (40-42/48.2-50.2 GHz) as well as flexible satellite broadband access in the other parts of the Q/V bands designated for terrestrial use. As in-flight broadband demand grows, as explained below, JetBlue and our satellite broadband partners will need access to more spectrum, just like terrestrial providers, to meet consumer demand.

JetBlue carries more than 38 million customers a year to 101 cities in the U.S., Caribbean, and Latin America with an average of 1,000 flights per day. Fly-Fi®, JetBlue's free onboard Wi-Fi service, was launched in December 2013 and as of January 2017 is available on every JetBlue flight. Within ten months of launch, with only a portion of JetBlue's fleet installed, JetBlue experienced its one millionth Fly-Fi logon, with 66 terabytes of data downloaded. Since then, we have seen significant increases in usage. As we grow our fleet and expand our service offerings, we expect that usage by our customers will continue to grow.

Our ability to meet our customers' needs is dependent on our partners' growth as well. That growth will demand more and more bandwidth for higher speeds and data requirements in the cabin and cockpit; bandwidth that can be provided with satellite's continued primary and flexible access to the Q/V Bands to meet the growing demand.

We support the FCC's efforts to bridge the digital divide between urban and rural America, but we also urge the Commission to ensure that the customers that fly every day on our airline have access to the broadband that meets their needs in the future through our satellite partners.

Sincerely,

A handwritten signature in blue ink, appearing to read "Martin St. George", written over a horizontal line.

Martin St. George
EVP Marketing and Commercial Strategy