

JONES DAY

51 LOUISIANA AVENUE, N.W. • WASHINGTON, D.C. 20001.2113
TELEPHONE: +1.202.879.3939 • FACSIMILE: +1.202.626.1700

DIRECT NUMBER: (202) 879-3630
BOLCOTT@JONESDAY.COM

April 12, 2016

VIA ELECTRONIC FILING

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

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

Dear Ms. Dortch:

The Boeing Company (“Boeing”), through its counsel, provides the following comments on the letter that was filed in the above referenced dockets by AT&T Services, Inc. and EchoStar Corporation, dated April 6, 2016, proposing a potential framework for sharing of the 27.5-28.35 GHz (“28 GHz”) and the 37.0-40.0 GHz (“37/39 GHz”) bands between the Fixed-Satellite Service (“FSS”) and the proposed Upper Microwave Flexible Use (“UMFU”) service.

The AT&T/EchoStar proposal may provide a viable approach that would permit EchoStar and potentially certain other satellite network operators to use portions of the 28 and 37/39 GHz bands for satellite services. Boeing, however, is concerned that the proposal would preclude the launch of future satellite networks that require greater access to the entirety of this spectrum in order to provide significantly greater capacity and throughput to support broadband services. Boeing therefore urges the Commission to provide sufficient time for a broader section of the satellite community to complete its discussions with terrestrial 5G proponents on achieving a spectrum sharing solution that truly facilitates the shared use of the 28 and 37/39 GHz bands by both satellite and terrestrial 5G interests to fulfill the broadband capacity needs of the future.

As background, on March 7, 2016, Chairman Thomas Wheeler, speaking at the 19th Annual Satellite Leadership Dinner in Washington, implored the satellite industry “to work with the mobile industry and quickly come back to us with realistic sharing ideas for the coexistence of satellite and mobile” in the 28 and 37/39 GHz bands. The satellite industry took this message to heart and engaged with renewed determination in detailed technical discussions with terrestrial carriers and wireless equipment manufacturers to identify spectrum sharing measures that can

Marlene H. Dortch
April 12, 2016
Page 2

facilitate highly efficient shared use of scarce spectrum resources in the 28 and 37/39 GHz bands.

As Chairman Wheeler acknowledged, the sharing discussions require the satellite and mobile industries “to work diligently to resolve the technical details necessary for sharing scarce spectrum across the spectrum chart, so that a variety of technologies can work together in deploying broadband and maximizing the benefits of high-speed connectivity.” The potential benefits of these discussions are substantial, but the technical challenges are significant and they are requiring both deliberate and creative technical analysis to resolve.

Boeing strongly believes that the technical discussions between the satellite industry and 5G proponents will identify innovative and effective measures to enable real-time sharing between terrestrial 5G and satellite earth stations throughout the entirety of the 28 and 37/39 GHz bands. Particularly in the 37/39 GHz band, where both 5G and satellite communications technologies are rapidly under development, substantial opportunities exist to deploy both terrestrial 5G services and satellite earth stations throughout the United States linking customers in every location and ensuring that the promise of our broadband future is not limited to people in major cities, or the “urban core.”

The potential benefits of this shared spectrum infrastructure are enormous. As Chairman Wheeler observed, “access to broadband is a powerful motor for lifting people from poverty and reducing economic inequalities.” For this reason, the United Nations is implementing a goal of providing “universal and affordable access to the Internet in least developed countries by 2020.” In addition, Secretary John Kerry is leading the Global Connect Initiative, which seeks to bring an additional 1.5 billion people online by 2020, both by providing broadband directly to end-users, and providing backhaul to the Internet backbone. The Chairman was correct in affirming that “satellites will be crucial to the success of both efforts.”

The lack of accessible and affordable broadband for many consumers, however, is not confined to distant nations. In the United States, a substantial divide continues to exist between people who enjoy access to competitive broadband offerings and those who lack this basic necessity. The satellite industry is working diligently to address these inequities by designing satellite networks that can use the 28 and 37/39 GHz to provide exponentially greater capacity and broadband throughput. Existing satellite networks have already successfully demonstrated that they provide attractive and competitive broadband services to end users in populous communities and rural areas alike, and the Commission should facilitate, not prevent, the expansion of these important broadband services.

For these reasons, Boeing believes that the AT&T/EchoStar proposal for the 28 and 37/39 GHz bands could be improved through additional technical analysis. The proposal carves

Marlene H. Dortch
April 12, 2016
Page 3

out the most populous “urban core” areas (and, in some cases, the surrounding suburbs) for 5G services, limiting satellite access to the band to individually licensed earth stations, often on a secondary unprotected basis. Where co-primary spectrum sharing is proposed between satellite and 5G services, the AT&T/EchoStar framework does not provide significant guidance on how it will be accomplished, suggesting only that UMFU licensees must engage in “good faith coordination for siting of new individually-licensed FSS earth stations.”

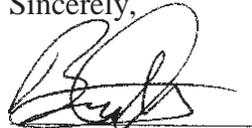
Most important, the AT&T/EchoStar proposal appears to prejudge the continuing and vigorous discussions that are ongoing between the satellite industry and 5G proponents on identifying the most effective spectrum sharing solutions for the 28 and 37/39 GHz bands. Both AT&T and EchoStar remain active participants in these spectrum sharing discussions, with each offering additional technical contributions and critiques during a conference call that was held by the Satellite Industry Association on Thursday, April 7th, one day after AT&T and EchoStar filed their proposal with the Commission.

Boeing therefore urges the Commission to recognize that the AT&T/EchoStar proposal provides only a single viewpoint on the potential use of the 28 and 37/39 GHz bands, and does not represent a consensus of the satellite industry. Instead, the satellite industry remains focused on technical efforts to develop workable sharing arrangements, and the Commission should provide sufficient time for those efforts to reach a resolution.

Boeing recognizes that the Commission seeks to move quickly in this proceeding to ensure that the United States remains a leader in launching 5G terrestrial services. At the same time, and as Chairman Wheeler explained, “it’s more important than ever that we at the FCC get regulation right.” To accomplish this, the Commission should continue to accommodate discussions within the industry that are likely to lead to truly beneficial spectrum sharing measures that can ensure the robust growth of both terrestrial 5G and broadband satellite services in the United States and throughout the world.

Thank you for your attention to this matter. Please contact the undersigned if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Bruce A. Olcott", written over a horizontal line.

Bruce A. Olcott

Counsel to The Boeing Company