



May 31, 2016

BY ELECTRONIC FILING

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

Re: *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services, et al.*, GN Docket No. 14-177, IB Docket Nos. 15-256 and 97-95; RM-11664; and WT Docket No. 10-112

Dear Ms. Dortch:

In this proceeding, EchoStar Satellite Operating Corporation, Hughes Network Systems, LLC and Alta Wireless, Inc. (collectively “EchoStar”), along with other satellite broadband providers, have demonstrated the crucial role satellites play in expanding the reach of broadband capabilities to millions of U.S. customers, supporting first responders, and providing connectivity in emergency and other situations where terrestrial facilities have been compromised. They have also showed how some of the Commission’s proposals in this proceeding, however well intentioned, would undermine years of effort and billions of dollars of investment by satellite operators, especially with respect to development of the spectrum from 27.5-28.35 GHz (“28 GHz band”). In order to better and more equitably harness the full potential of this band, a group of those operators recently submitted principles to promote the co-primary sharing of the 28 GHz band between individually-licensed Fixed-Satellite Service (“FSS”) earth stations and potential new Upper Microwave Flexible Use (“UMFU”) licensees.¹ To that list, EchoStar would add the following for both the 28 GHz band and the spectrum from 37.5-40.0 GHz (“38 GHz band):

FSS operators may deploy individually-licensed earth stations operating in the 28 GHz and 38 GHz bands at the site of any individually-licensed FSS earth station (regardless of frequency band) already in existence or applied for by the time the geographic area that includes such site is licensed through a UMFU auction or awarded by operation of Commission rule. All 28 GHz and 38 GHz earth stations constructed at such locations will be given co-primary status with UMFU licensees.

Adoption of this rule will result in additional certainty for all services sharing the 28 GHz and 38 GHz bands. FSS satellite operators require three to four years to design and build the advanced space stations used to provide broadband services. Once the design has been finalized, the locations of the earth stations needed to support those satellites are locked in – years before

¹ See Letter from Jennifer A. Manner, *et al.* to Marlene H. Dortch, GN Docket No. 14-177, *et al.* (May 26, 2016).

actual deployment and commencement of operations. Those earth stations, in turn, require reasonable and economical access to infrastructure such as fiber, data centers, and power, in order to supply efficient broadband connectivity. As a result, FSS earth stations cannot simply be relegated to only the most rural areas, as that would increase infrastructure costs dramatically and build in long lead times for construction.²

Thus, FSS operators need both long-term regulatory certainty and reliable access to supporting infrastructure. The Commission can accomplish both objectives by leveraging FSS operators' existing capabilities at the locations where they have already placed individually-licensed earth stations. Accordingly, the proposed rule would allow FSS operators to locate individually-licensed earth stations operating in the 28 GHz and 38 GHz bands at the site of any other individually-licensed earth station (regardless of frequency band), where they would be given co-primary status with UMFU operations. FSS operators would then have an incentive to design their systems to use pre-existing earth station sites, which are likely to afford reasonable and economical access to the infrastructure required to support broadband services. This rule would also enable interested parties to identify the location of potential 28 GHz and 38 GHz band earth station sites prior to auction of UMFU licenses and to take those sites into account for purposes of both bidding and network design.

We believe that this proposed rule appropriately balances the desire to promote new terrestrial 5G mobile services while also protecting the interests of FSS operators currently using and planning to use the 28 GHz and 38 GHz band. We urge the Commission to implement this proposal.

Sincerely yours,

/s/ Jennifer Manner

Jennifer A. Manner
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² Because of its infrastructure requirements, EchoStar has not deployed individually-licensed earth stations in truly remote locations. However, when it has deployed in relatively less developed areas to date, the costs are significantly higher than in more developed areas. For example, the non-recurring expenses per line under a contracted term of 2 to 3 years (plus service charge) run from approximately \$5,000 per month where fiber is readily available to over \$50,000 per month where fiber is harder to come by. We would expect those costs to increase substantially in more rural locations. Indeed, in truly remote locations, there may not even be a carrier willing to incur the significant cost of extending a fiber line. In addition, restricting deployment to rural areas effectively eliminates most (if not all) data centers from consideration. Thus, the operator would need to either lease or buy a location and develop the site itself. EchoStar estimates that developing such a facility in the areas where they exist today costs approximately \$1-\$1.5 million, which excludes ongoing operating costs. Here again, we would expect those costs to increase substantially if the data center must be developed in a truly remote location where securing necessary infrastructure (power, connectivity, etc.) is more problematic.

Marlene H. Dortch

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cc: Michael Ha
Jose Albuquerque
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