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By Electronic Filing

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

**Re: Sirius XM Written *Ex Parte* Presentation
ET Docket No. 18-295, Unlicensed Use of the 6 GHz Band
GN Docket No. 17-183, Expanding Flexible Use in Mid-Band
Spectrum Between 3.7 and 24 GHz**

Dear Ms. Dortch:

Sirius XM Radio Inc. (“Sirius XM”) hereby responds to the *ex parte* filed by Ericsson in the above-referenced proceeding urging the Commission to make the upper portion of the 5.925-7.125 GHz spectrum (“Upper 6 GHz Band”) available for a new licensed service.¹ As discussed below, Ericsson’s filing simply ignores the critical use of the Upper 6 GHz Band for feeder links necessary to support delivery of Satellite Digital Audio Radio Service (“SDARS”) to over 34 million Sirius XM subscribers and other listeners. Because these feeder links cannot be moved to other frequencies or be transmitted using a different technology, the Commission must reject Ericsson’s proposal to introduce licensed services at the expense of incumbent operations. Instead, the Commission should limit any new uses of the Upper 6 GHz Band to unlicensed devices operating indoors at low power, as it has proposed.²

Sirius XM has explained in its filings in this proceeding that the 7.025-7.075 GHz segment of the 6 GHz band is the sole spectrum available for and used by Sirius XM to uplink

¹ Ericsson, Oral *Ex Parte* Notice, ET Docket No. 18-295 & GN Docket No. 18-122, filed Oct. 16, 2019 (the “Ericsson Submission”). *See also* CTIA, Oral *Ex Parte* Notice, ET Docket No. 18-295 & GN Docket No. 17-183, filed Oct. 22, 2019 (the “CTIA Submission”) at 1 (supporting licensed use in the Upper 6 GHz Band); T-Mobile, Oral *Ex Parte* Notice, ET Docket No. 18-295 et al., filed Oct. 24, 2019 (the “T-Mobile Submission”) at 2 (same). To the extent the CTIA Submission and T-Mobile Submission also urge the Commission to allow licensed use of the Upper 6 GHz Band, Sirius XM hereby responds to those filings as well.

² *Unlicensed Use of the 6 GHz Band*, Notice of Proposed Rulemaking, ET Docket No. 18-295 et al., 33 FCC Rcd 10496 (2018) (“Notice”) at 10518-22, ¶¶ 59-72.

programming to SDARS satellites for reception by its customers.³ When the Commission initially authorized the SDARS service, it recognized that SDARS systems “cannot operate without sufficient feeder link spectrum”⁴ because “feeder link networks are essential to deliver service to the end user.”⁵ Sirius XM therefore relied on the availability of this band in constructing and launching its multi-satellite SDARS network both initially and for its replacement satellites.⁶

As Sirius XM explained earlier in this proceeding:

The active satellites and in-orbit spare spacecraft in Sirius XM’s deployed fleet, as well as the next-generation replacement spacecraft currently under construction, are all designed to use only the feeder link spectrum currently authorized by the Commission, with their utility therefore depending entirely on the spectrum’s continued availability and reliability.⁷

Interference-free access to the 7.025-7.075 GHz band is essential to the continued operation of the Sirius XM service.

Ericsson ignores Sirius XM’s continuing need for this spectrum and its comments in this docket. The Ericsson Submission, which asks the Commission to “repurpos[e] the 6.425-7.125 GHz band for flexible use licensed service,”⁸ makes no mention of SDARS feeder link operations or how they would be protected in the event of such a repurposing. Instead, Ericsson discusses only other incumbent uses of the Upper 6 GHz Band – terrestrial Fixed Service (“FS”) microwave links, television Broadcast Auxiliary Service (“BAS”), and Cable Television Relay Service (“CARS”)⁹ – suggesting that these services be transitioned to other bands or to alternate

³ See Comments of Sirius XM Radio Inc., ET Docket No. 18-295 & GN Docket No. 17-183, filed Feb. 15, 2019 (“Sirius XM Comments”) at i, 1-2, 11; Reply Comments of Sirius XM Radio Inc., ET Docket No. 18-295 & GN Docket No. 17-183, filed Mar. 18, 2019 (“Sirius XM Reply Comments”) at 2, 8-9.

⁴ *Establishment of Rules and Policies for the Digital Audio Radio Satellite Service in the 2310-2360 MHz Frequency Band*, IB Docket No. 95-91, Report and Order, Memorandum Opinion and Order, and Further Notice of Proposed Rulemaking, 12 FCC Rcd 5754, 5807, ¶ 129 (1997).

⁵ *Id.* at 5806, ¶ 127.

⁶ See, e.g., *Sirius XM Radio Inc.*, File Nos. SAT-RPL-20180430-00034 & -00035, Call Signs S3033 and S3034 (applications for SXM-7 and SXM-8 replacement satellites with feeder link spectrum in the 7.025-7.075 GHz band), granted Oct. 3, 2018.

⁷ Sirius XM Comments at 11.

⁸ Ericsson Submission at 1.

⁹ See *id.*, Attachment at 4 (presenting a chart that identifies only FS, BAS, and CARS as incumbent users of the 6.525-7.125 GHz frequencies).

transmission mediums, such as fiber or 5G, to accommodate Ericsson's proposal for licensed services in the band.¹⁰

These measures are not viable options for the Sirius XM feeder links. Unlike terrestrial facilities, in-orbit satellites cannot be modified to use different frequencies, even if suitable alternative spectrum could be identified. And of course no terrestrial transmission method can be used to uplink SDARS programming to the Sirius XM satellite fleet for delivery to tens of millions of users across the country. Thus, Ericsson's proposal to displace existing users in favor of new licensed operations in the Upper 6 GHz Band is not only inconsistent with the purpose of this proceeding as expressed in its title – to explore “Unlicensed Use of the 6 GHz Band” – it also directly conflicts with the Commission's obligation to protect the continuity and reliability of incumbent services in this spectrum.¹¹

As Sirius XM has explained, even if the Commission limits use of the Upper 6 GHz Band to indoor, low-power unlicensed devices, aggregate interference from a large number of transmitters would create additional noise at the SDARS space station receiving antennas which, combined with interference caused from terrestrial sources, would degrade the integrity of the programming reception of the satellite radio service.¹² To contain this risk, the Commission must adopt measures to enforce the indoor-only restriction it proposed in the Notice and prevent users from altering their devices to circumvent regulatory limits on where and how transmitters can be operated in this band segment.¹³ Moreover, because predictions of the likelihood of harmful interference due to unlicensed use of the Upper 6 GHz Band are inherently speculative, the Commission should impose a backstop limit on the total interference-to-noise ratio received at any SDARS satellite antenna and bar deployment of additional terminals using the feeder link spectrum if that limit is reached.¹⁴ Implementing these precautions will minimize the possibility that permitting new operations in the Upper 6 GHz Band will disrupt Sirius XM's network and the valuable programming it provides.

¹⁰ *Id.*, Attachment at 5, 7. CTIA and T-Mobile ignore the Upper 6 GHz Band operations of not only SDARS but also of BAS and CARS – these parties address only FS incumbents and suggest that they be relocated to spectrum above 7.125 GHz or to other comparable facilities. CTIA Submission at 1; T-Mobile Submission at 2.

¹¹ See Notice at ¶ 1 (the rules proposed by the Commission are intended to provide new opportunities for unlicensed use of 6 GHz spectrum “while ensuring that licensed services operating in the band continue to thrive”); see also *id.* at ¶ 2 (emphasizing the Commission's “commitment to preserve and protect the important base of incumbent users” in 6 GHz frequencies).

¹² See Sirius XM Comments at i-ii, 3-4; Sirius XM Reply Comments at 2-4.

¹³ See Sirius XM Comments at 11-17 (discussing measures necessary to prevent users from moving devices outdoors or from impermissibly modifying them to evade power limits in the band); Sirius XM Reply Comments at 8-14 (same).

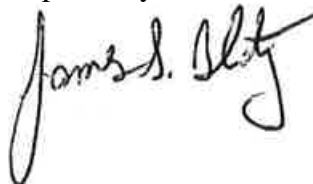
¹⁴ Sirius XM Comments at 17-18; Sirius XM Reply Comments at 14-16.

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In contrast, the wholesale reallocation of the Upper 6 GHz Band sought by Ericsson would be destructive to incumbent SDARS operations. The Sirius XM service cannot withstand the added interference new high-powered, licensed transmissions would create, and its feeder links cannot be moved to different frequencies or a comparable function provided using another technology. To ensure that Sirius XM can continue to deliver high-quality news, entertainment, sports, and public safety information to its U.S. listeners without disruption, the Commission must reject the Ericsson request and must limit any use of the Upper 6 GHz Band to low-powered, indoor unlicensed devices as proposed in the Notice and with the additional safeguards described by Sirius XM in its filings.

Please address any questions regarding these matters to the undersigned.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "James S. Blitz". The signature is fluid and cursive, with the first name "James" and last name "Blitz" clearly legible.

James S. Blitz