

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)	
)	IB Docket No. 18-313
Mitigation of Orbital Debris in the)	
New Space Age)	

REPLY COMMENTS OF SIRIUS XM RADIO INC.

I. INTRODUCTION

Sirius XM Radio Inc. (“Sirius XM”) submits these reply comments responding to the Commission’s Notice of Proposed Rulemaking in the above-captioned proceeding,¹ encouraging the Commission to consider the impact of its proposed orbital debris mitigation requirements on GSO operations in general and the Satellite Digital Audio Radio Service (“SDARS”) in particular. Specifically, Sirius XM requests that the Commission: (1) account for SDARS licensees if it adopts its proposals on GSO license extensions; (2) not adopt its proposal related to orbit raising coordination for GSO satellites; (3) not require encryption of telemetry, tracking, and command (“TT&C”); (4) not adopt insurance or indemnification requirements; and (5) ensure that operators are not subject to multiple and potentially conflicting regulatory regimes for orbital debris.

II. DISCUSSION

A. The GSO License Extension Proposal Must Account for SDARS

As expressed in its initial comments, Sirius XM generally supports the Commission’s proposal to limit license extensions for GSO satellites to no more than five years in a single

¹ *Mitigation of Orbital Debris in the New Space Age*, Notice of Proposed Rulemaking and Order on Reconsideration, 33 FCC Rcd 11352 (2018) (“NPRM”).

modification application for licensees originally issued a 15-year license term.² However, licensees having an initial license term of less than 15 years, such as SDARS licensees which are granted an initial term of only eight years, should not be limited to the same five-year extension. Regardless of the Commission's rationale for initially licensing certain satellite services with shorter license terms than others, there is no reason for requiring Sirius XM to obtain multiple license extensions before reaching the standard term afforded other satellite services, especially when SDARS satellites are designed to last just as long as any other GSO spacecraft. Most commenters who addressed the issue of GSO license extensions suggested that the Commission should permit operators to request longer extensions on a case-by-case basis.³ Moreover, unless the Commission modifies its rules to harmonize SDARS license terms with the terms of other satellite services, the proposed approach would represent at least a step towards a satellite licensing regime that does not unfairly disadvantage SDARS.⁴ For these reasons, the Commission should allow SDARS licensees a first license extension of up to eight years and thereafter subject SDARS to the same license extension cap it applies to other satellite services.

B. The Commission Should Not Apply its Orbit Raising Coordination Rule to GSO Satellites

As Sirius XM stated in its comments, there is no reason to require formal coordination for GSO TT&C during orbit raising.⁵ Both Eutelsat and Viasat agree with Sirius XM on this point.⁶

² Comments of Sirius XM Radio Inc., IB Docket No. 18-313, at 2-3 (filed Apr. 5, 2019) ("Sirius XM Comments"). All comments cited were filed on April 5, 2019 in IB Docket No. 18-313.

³ See, e.g., Comments of The Boeing Company at 34 ("Boeing Comments"); Comments of EchoStar Satellite Operating Corporation and Hughes Network Systems, LLC at 7.

⁴ Notably AT&T supported a similar proposal to Sirius XM's in the context of the Direct Broadcast Satellite service, where satellites are limited to 10-year license terms under current rules. See Comments of AT&T Services, Inc. at 4-5.

⁵ Sirius XM Comments at 7.

⁶ See Comments of Eutelsat S.A. at 5-6 ("Eutelsat Comments"); Comments of Viasat, Inc. at 7.

Orbit raising operations should be conducted simply on a non-harmful-interference, unprotected basis. Informal coordination among operators is sufficient for this purpose.

C. The Commission Should Not Require Encryption of Telemetry, Tracking, and Command Communications

The FCC should not adopt its proposal to require encryption of TT&C. While many commenters addressing this issue either oppose this proposal outright or argue that the requirement is unnecessary,⁷ a handful of commenters argue that encryption should be required.⁸ While Sirius XM respects that cybersecurity is a legitimate and growing area of concern, this concern is overstated in the satellite context. Satellites can be adequately secured from malicious actors without using cumbersome encryption protocols. A TT&C encryption requirement would have significant financial, operational, and practical impacts on satellite operators, and commenters supporting the FCC's proposal do not account for these impacts. Sirius XM reiterates that if the Commission adopts any proposal here, it should require only a certification that TT&C communications are "secure" and leave the specific means of establishing that security to the operators themselves.⁹ If the Commission nevertheless adopts a TT&C encryption requirement, it must grandfather all in-orbit and under-construction satellites, as many of these systems were designed and constructed without the necessary equipment to encrypt TT&C communications.

⁷ See, e.g., Boeing Comments at 36-37; Eutelsat Comments at 8-11; Comments of Intelsat License LLC at 11-12.

⁸ See, e.g., Comments of Tyvak; Comments of Maxar Technologies Inc. at 14; Comments of LeoSat MA, Inc. at 8.

⁹ Sirius XM Comments at 8-9.

D. The Commission Should Not Adopt its Proposals Related to Indemnification and Insurance

As Sirius XM explained, the FCC should not adopt its proposals related to insurance and indemnification for satellite operators.¹⁰ The record reflects strong opposition to these proposals, which would impose significant and unnecessary costs on satellite operators while doing little to mitigate orbital debris or incentivize good behavior.¹¹ Sirius XM agrees with commenters who suggest that imposing such a requirement is potentially outside the FCC's authority and that, at a minimum, the FCC has not adequately established the legal basis for imposing any such requirements.¹²

E. The Commission Should Consider Harmonizing its Approach to Orbital Debris with Other Federal Agencies

Sirius XM is concerned that with multiple Federal agencies engaged in ongoing inquiries into space traffic management, space situational awareness, and orbital debris mitigation, U.S. satellite operators may become subject to conflicting regulatory regimes. At least three proceedings at different Federal agencies currently address similar issues,¹³ creating uncertainty for satellite operators and the risk that these agencies may adopt conflicting rules and standards as a result of these proceedings. Other NPRM commenters raised similar concerns.¹⁴ Having

¹⁰ *Id.* at 9-10.

¹¹ *See, e.g.*, Comments of Space Logistics, LLC at 9-11; Boeing Comments at 38-39.

¹² *See* Comments of the Satellite Industry Association at 8-9; Comments of Telesat Canada at 11 ("Telesat Comments"); Comments of WorldVu Satellites Limited at 29-30 ("WorldVu Comments").

¹³ In addition to the FCC's NPRM, the Department of Commerce and the Federal Aviation Administration have both released items seeking comment on issues related to orbital debris in recent weeks. *See* Request for Information on Commercial Capabilities in Space Situational Awareness Data and Space Traffic Management Services, 84 Fed. Reg. 14645 (Apr. 11, 2019); Streamlined Launch and Reentry Licensing Requirements, 84 Fed. Reg. 15296 (Apr. 15, 2019).

¹⁴ *See, e.g.*, Comments of Space Exploration Technologies Corp. at 4; Telesat Comments at 1-2; WorldVu Comments at 1; Boeing Comments at 5. *See generally* Comments of the United States Department of Commerce (filed Apr. 5, 2019).

multiple regulatory regimes will impose substantial compliance costs on operators, lead to confusion about how to comply with the rules of various agencies, and could create a situation where compliance with one agency's rule results in a violation of the rules of another agency. While Sirius XM takes no position on the appropriate agency for regulation of orbital debris at this time, the Commission must carefully consider these activities and harmonize its approach with other agencies to the greatest extent possible.

III. CONCLUSION

As the Commission moves forward in this proceeding, it must ensure that whatever rules it adopts adequately account for SDARS systems, do not impose unreasonable and unnecessary burdens on satellite operators, and are harmonized with other Federal agencies in areas of overlapping jurisdiction.

Respectfully submitted,

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