

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

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

**COMMENTS OF INTELSAT LICENSE LLC**

## EXECUTIVE SUMMARY

Intelsat License LLC (“Intelsat”), a leading provider of satellite services, appreciates the opportunity to provide comments on the Federal Communications Commission’s (“FCC” or “Commission”) Notice of Proposed Rulemaking (“NRPM”) in its proceeding entitled *Mitigation of Orbital Debris in the New Space Age*. While the Commission’s efforts to improve and clarify its existing regulations governing the mitigation of orbital debris are commendable, the Commission’s endeavor will benefit substantially from the Commission conducting additional legal analysis, ensuring cohesion with domestic and international standards, refining or revising certain proposals, and declining to adopt other proposals. Intelsat therefore urges the Commission to take the following steps as it continues with this proceeding:

First, to ensure that the Commission’s rules are consistent with its authority and obligations to regulate radiofrequency use in the public interest, the Commission should undertake its proposal in the NPRM to refresh its prior legal analysis of the Commission’s authority to take into account existing and ongoing work by other regulatory bodies and international standards organizations as it considers changes to existing FCC rules.

Second, to the extent the Commission continues to regulate orbital debris, it should adopt, refine, or reject the NRPM’s proposals as follows:

- The Commission should adopt its proposals related to orbit raising, satellite tracking and data sharing by non-geostationary (“NGSO”) systems, post-mission space station lifespans, and considering means to facilitate direct retrieval, with minor revisions as proposed by Intelsat;

- The Commission should substantially revise its proposals related to NGSO collision risks and assessing geostationary satellite health for license term extensions to allow for more flexible approaches; and
- The Commission should decline to adopt additional requirements related to license extensions, encryption of telemetry, tracking, and command communications, and indemnification, as any such requirements would be unduly burdensome and unnecessary.

Addressing the comments and proposals offered herein will help the Commission ensure that its orbital debris rules are consistent with FCC authority and best serve the Commission's policy objectives.

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**I. INTRODUCTION**

Intelsat License LLC (“Intelsat”) hereby provides comments in response to the above-captioned Notice of Proposed Rulemaking (“NPRM”). In the NPRM the Federal Communications Commission (“FCC” or “Commission”) takes its “first comprehensive look” at orbital debris rules since their adoption on 2004.<sup>1</sup>

While Intelsat appreciates the Commission’s desire to improve and clarify the Commission’s existing orbital debris rules, Intelsat urges the Commission to first refresh its analysis on the scope of the Commission’s regulatory authority to regulate orbital debris, in light of the regulatory and standards bodies that have assumed responsibility over orbital debris since 2004. Intelsat urges the Commission to carefully consider the work of these other agencies and organizations in the interest of avoiding duplicative requirements and inconsistent standards.

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<sup>1</sup> See *Mitigation of Orbital Debris in the New Space Age et al.*, Notice of Proposed Rulemaking and Order on Reconsideration, IB Docket No. 18-313 *et al.*, FCC 18-159, ¶ 3 (Nov. 19, 2018) (“NPRM”).

Further, the Commission should also carefully consider the impact the agency’s proposed rules will have on innovation in the space sector.

Intelsat supports many of the specific proposals advanced in the NPRM, such as requiring orbit raising, satellite tracking and data sharing by non-geostationary (“NGSO”) systems, imposing post-mission space station lifespans, and considering means to facilitate direct retrieval. Intelsat provides only minor revisions and suggestions with respect to these proposals to enhance their effectiveness. Two of the Commission’s proposals—that NGSO applicants quantify risk of collision and that geostationary (“GSO”) satellite applicants seeking license extensions certify that the satellite has no single point of failure—are unworkable as proposed and should be replaced with more flexible standards. Finally, the Commission’s proposals related to additional requirements on license extensions, encryption of telemetry, tracking, and command (“TT&C”) communications, and indemnification are overly burdensome and unnecessary, and thus should not be adopted.

## **II. THE COMMISSION SHOULD REFRESH ITS PRIOR ANALYSIS OF ITS JURISDICTION TO REGULATE ORBITAL DEBRIS AND ENSURE ITS REGULATIONS ARE CONSISTENT WITH INTERNATIONAL STANDARDS.**

As a threshold matter, Intelsat supports the NPRM’s inquiry into the basis for the Commission’s regulatory authority to regulate orbital debris.<sup>2</sup> Intelsat supports the Commission refreshing its prior analysis on its authority to regulate orbital debris because in the last 15 years other agencies have assumed responsibility in this area in ways that may affect the legal analysis. Indeed, the NPRM points to relevant standards development by National Aeronautics and Space Administration (“NASA”), the United Nations Committee on the Peaceful Uses of Outer Space,

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<sup>2</sup> *Id.* ¶¶ 15-17.

and the Inter-Agency Space Debris Coordination Committee;<sup>3</sup> the longstanding role in regulating orbital debris issues played by the National Oceanic and Atmospheric Administration (“NOAA”), the Department of Transportation, and the Federal Aviation Administration (“FAA”);<sup>4</sup> and the evolving responsibilities of the Office of Space Commerce within the Department of Commerce.<sup>5</sup> The Commission should reevaluate its prior legal conclusions about the scope of FCC regulation of orbital debris taking into account orbital debris regulation and standards work from other bodies.

Additionally, to the extent the Commission continues regulating orbital debris issues following this legal analysis, the Commission should take the work by other regulatory bodies and standards organizations into account when revising its rules and should seek to avoid both redundant regulation and the imposition of inconsistent standards. This is particularly important with respect to international standards, as the FCC’s adoption of requirements that are more stringent than governing international standards could disadvantage U.S. licensees vis-à-vis other operators. In this regard, Intelsat urges the Commission to consider International Organization for Standardization (“ISO”) standard 24113:2011 governing space debris mitigation requirements,<sup>6</sup> in addition to the standards and regulations promulgated by the organizations identified in the NPRM and discussed above.

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<sup>3</sup> *Id.* ¶ 7.

<sup>4</sup> *Id.* ¶ 16.

<sup>5</sup> *Id.* ¶ 17.

<sup>6</sup> International Organization for Standardization, ISO 24113:2011: Space systems – Space debris mitigation requirements (2011), <https://www.iso.org/standard/57239.html>.

### **III. THE COMMISSION SHOULD ADOPT SEVERAL OF ITS PROPOSALS, CONSISTENT WITH THE REVISIONS PROPOSED HEREIN.**

Subject to the outcome of the foregoing legal analysis, Intelsat supports a number of the proposals set forth in the NPRM regarding orbit raising, tracking and data sharing by NGSO systems, post-mission space station lifespans, and means to facilitate direct retrieval. The Commission should pursue these proposals but consider the revisions proposed by Intelsat and discussed herein.

#### **A. The Commission Should Adopt Its Proposals Regarding Orbit Raising and Should Apply Its Proposed Coordination Requirement to All Launch and Early Orbit Phase Operations.**

Intelsat supports the Commission's proposals to refine its policies with respect to TT&C communications for the purpose of orbit raising operations. As the Commission rightly points out, orbit raising TT&C operations are "critical to effective spacecraft maneuvering"<sup>7</sup> and, consequently, are of paramount importance to the overall safety of the space station ecosystem. Accordingly, Intelsat agrees that the Commission should expand Section 25.282, which provides authorization for TT&C operations for GSO orbit raising, to include NGSO systems.

Further, Intelsat strongly agrees with the Commission that "[i]t is in the public interest that these types of [TT&C] communications . . . be coordinated as necessary to avoid interference,"<sup>8</sup> and thus supports the Commission's proposal to revise Section 25.282 to require orbit raising operations to be coordinated rather than conducted on a non-interference basis as they are today. Given the public interest benefits of ensuring the success of orbit raising operations, the Commission should consider extending this protection to that *all* orbit raising operations,

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<sup>7</sup> NPRM ¶ 71.

<sup>8</sup> *Id.*



including earth-to-space launch and early orbit phase (“LEOP”) operations conducted by earth stations, which are currently authorized pursuant to special temporary authority. Specifically, Intelsat recommends the FCC consider rules imparting earth stations providing LEOP services with the same protections afforded space station for orbit raising operations so long as those services have been coordinated.

**B. The Commission Should Adopt Satellite Tracking and Data Sharing Requirements for NGSO Systems.**

Intelsat appreciates the Commission’s efforts to improve satellite tracking and data sharing measures by NGSO operators and supports many of the proposals in this regard put forth in the NPRM. First, Intelsat agrees with the Commission that “improvements in the ability to track and identify satellites in NGSO may help to reduce the risk of collisions.”<sup>9</sup> For this reason, Intelsat supports the Commission’s proposal to require that NGSO applicants “certify that the satellite will include a unique telemetry marker allowing it to be readily distinguished from other satellites or space objects.”<sup>10</sup> With respect to the Commission’s proposals on identifying what objects are deemed trackable,<sup>11</sup> Intelsat notes that the ability to track objects in space depends not only on the object’s size but also its reflectivity. Therefore, Intelsat encourages the Commission to amend its current proposal to also require new NGSO satellites to be equipped with simple broadcast beacons and/or corner reflectors to allow for easy passive tracking if the spacecraft becomes disabled.

With respect to data sharing, Intelsat fully agrees with the Commission’s proposals both to “requir[e] NGSO satellite operators to provide . . . information regarding initial deployment,

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<sup>9</sup> NPRM ¶ 36.

<sup>10</sup> *Id.*

<sup>11</sup> *Id.*

ephemeris, and any planned maneuvers” to the Air Force’s 18<sup>th</sup> Space Control Squadron or its successor and to “share ephemeris data with any other operator . . . of any operational space stations that may pose a collision risk.”<sup>12</sup> With respect to the latter requirement, Intelsat submits that NGSO operators that employ propulsion should share maneuver plans in addition to ephemeris data. This information will aid the Air Force’s 18<sup>th</sup> Space Control Squadron or its successor in predicting close approaches. Additionally, to facilitate data sharing, the Commission should encourage the operators to agree on standards and established formats for sharing data, such as those used by the Consultative Committee for Space Data Systems.

Intelsat further agrees with the Commission’s proposed policy to require NGSO applicants to certify that they will mitigate collision risks.<sup>13</sup> Consistent with the Commission’s other proposals regarding tracking and data sharing, Intelsat proposes that the NGSO operator also be required to certify that it will use available measures to track its satellites.

**C. The Commission Should Impose a Post-Mission Lifetime for NGSO Satellites of Two Times the Mission Length.**

The Commission rightly acknowledges a “trend toward shorter mission lifetimes for NGSO satellites” that calls into question “whether the 25-year disposal guideline contained in the *NASA Standard* remains a relevant benchmark.”<sup>14</sup> Intelsat submits that the 25-year disposal benchmark is too long for NGSO satellites and supports the Commission’s suggestion that “the disposal guideline instead [could] be proportional to mission lifetime.”<sup>15</sup> Specifically, new space

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<sup>12</sup> *Id.* ¶¶ 37, 73.

<sup>13</sup> NPRM ¶ 38.

<sup>14</sup> *Id.* ¶¶ 58-59.

<sup>15</sup> *Id.* ¶ 59.

stations should be designed to reenter the atmosphere within a timeframe that is two-times the original lifespan of the satellite. To mitigate the risk of satellites becoming orbital debris following the conclusion of their missions but prior to atmospheric re-entry, the broadcast beacon and/or corner reflector equipment proposed above could be used for continued passive tracking of the satellite until disposal commences.

**D. The Commission Should Monitor Industry-Led Initiatives Regarding Spacecraft Rendezvous.**

Finally, Intelsat appreciates the Commission’s focus on spacecraft retrieval technologies.<sup>16</sup> While Intelsat cannot directly comment on new retrieval technologies, Intelsat is involved with other types of proximity operations and on-orbit satellite servicing.<sup>17</sup> Intelsat encourages the FCC to monitor industry-led initiatives and industry standards bodies, such as the Consortium for Execution of Rendezvous and Servicing Operations (“CONFERS”), which focus on these issues.<sup>18</sup> The serious concern of orbital debris is not lost on industry participants—CONFERS’ Recommended Design and Operational Practices already focuses on design servicing operations to minimize the likelihood of and adverse consequences.<sup>19</sup>

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<sup>16</sup> *Id.* ¶ 54.

<sup>17</sup> See *Policy Branch Information; Space Station Applications Accepted for Filing*, Report No. SAT-01374, File No. SAT-MOD-20190207-00009 (Mar. 1, 2019) (Public Notice); see also *Policy Branch Information; Actions Taken*, Report No. SAT-01289, File No. SAT-LOA-20170224-00021 (Dec. 8, 2017) (Public Notice).

<sup>18</sup> See <https://www.satelliteconfers.org>. Intelsat is a member of CONFERS.

<sup>19</sup> Recommended Design and Operational Practices, CONFERS (Feb. 2019), available at <https://www.satelliteconfers.org/wp-content/uploads/2019/02/CONFERS-Operating-Practices-Approved-1-Feb-2019-003.pdf>.

#### **IV. THE COMMISSION SHOULD PURSUE ALTERNATIVE APPROACHES FOR ESTABLISHING NGSO COLLISION RISKS AND ASSESSING SATELLITE HEALTH FOR LICENSE TERM EXTENSIONS.**

Although Intelsat does not oppose in principle either a requirement for NGSO applicants to quantify collision risks or measures aimed at determining the health of a satellite for which an operator seeks a license extension, the Commission's proposals as set forth in the NPRM are unworkable. Intelsat herein offers alternative methods to achieve the policy objectives underlying each of these proposals.

##### **A. The Commission Should Adopt a More Nuanced Statement for NGSO Applicants Demonstrating Collision Risks.**

While the Commission's proposal to require applicants to certify that the probability of each satellite's risk of collision with large objects is less than 0.001 is appealing,<sup>20</sup> it is ultimately impracticable. Absent a specific method to calculate the probability of collision, which the NPRM does not provide, the proposal would be hard to meaningfully implement because there is not one universally accepted methodology, and research in this area is ongoing. The industry has not reached consensus on how to model probability of collision in part because of the limitations inherent in the model, the key inputs of which include the covariance matrix and the hard body radius. The covariance matrix, which includes the measurement and model errors of the satellite orbit solution, is subject to many uncertainties. In addition, obtaining an accurate estimate of reliable hard-body radius for non-cooperative satellites or space debris is not an easy task for operators and in some cases may not be possible.

Additionally, there is no practical value in the Commission codifying a specific size for what it considers a large object. The size of the object is not the sole determining factor for the

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<sup>20</sup> NPRM ¶ 26.

severity of a collision. The severity of a collision is determined by a combination of factors—size of both objects, incident angle, and the differential speed between the two objects. As such, codifying a specific size would limit the value of the certification.

As a result of the complexities related to determining collision probability, Intelsat suggests that the Commission replace a certification that includes a set probability with a statement from operators that includes a collision risk assessment. Operators could be asked to quantify the risk of collision and include the criteria and any assumptions they utilized. Such an approach would allow operators to use methods of modeling collision risk that they believe best provide an accurate risk assessment.

**B. The Commission Should Allow for the Provision of a Reliability Figure for License Extension Requests in Lieu of a Certification of No Single Points of Failure.**

Intelsat disagrees with the Commission’s proposal to require GSO licensees seeking license term extensions to “certify that the satellite has no single point of failure or other malfunctions...during its operations that could affect its ability to conduct end-of-life procedures as planned”<sup>21</sup> because such a certification is unnecessarily overbroad. This certification could result in an environment where a random early life failure on a very valuable asset could lead to a single point failure that would not ultimately prevent the successful de-orbit of the satellite but would nonetheless prevent an operator from obtaining a license extension.

To avoid this problem, Intelsat proposes GSO applicants also be allowed to, in the alternative, certify to a de-orbit reliability figure, such as certifying to at least a 90% probability of successful de-orbiting. Such an alternative would be in the public interest because it would allow GSO operators to continue providing service while also minimizing the orbital debris risk.

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<sup>21</sup> NPRM ¶ 65.

**V. THE COMMISSION SHOULD DECLINE TO ADOPT SEVERAL OF ITS PROPOSALS.**

The NPRM offers a number of proposals which are overly burdensome, unnecessary, or misguided and therefore should not be adopted. These proposals, which Intelsat addresses in turn below, include additional restrictions on license term extensions, mandatory TT&C encryption, and indemnification requirements.

**A. The Commission Should Not Impose Additional Restrictions on License Extensions.**

In addition to the proposed certification requirement discussed above regarding single points of failure, the NPRM seeks comment on a number of other issues and proposals related to license term extensions. The Commission should decline to restrict the term of license extensions, and should maintain its case-by-case approach for processing license extension requests.

First, the Commission proposes “to continue to assess the duration of the license term extension on a case-by-case basis, but propose[s] to limit extensions to no more than five (5) years in a single modification application for any satellite originally issued a 15-year license term.”<sup>22</sup> Such a requirement not only would unnecessarily burden licensees and FCC staff by imposing a limitation on license extensions that is untethered to the actual health of the satellite, but would have unintended consequences for global operators. Indeed, in some countries, such as Brazil, landing rights are granted for the term specified in the original U.S. license and only one (1) renewal is permitted. As a result, landing rights are limited to the duration of the initial U.S. license term plus the length of the extension.<sup>23</sup> Thus, if the Commission limited license extensions

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<sup>22</sup> NPRM ¶ 66.

<sup>23</sup> If the FCC granted a further extension of the license and there is a need to continue existing services, the satellite operator would be required to request the Brazilian authorities for a new landing right approval. This would subject the operator to a new and lengthy approval process and a new coordination analysis of the satellite network filings associated with the

to five-year terms, it would inadvertently limit the *maximum* period for landing rights in other countries for a satellite that could otherwise remain operational for years after the first renewal. To avoid this unintended consequence, the Commission should decline to adopt this proposal.

The NPRM also asks “whether there are certain types of satellite buses that may warrant heightened scrutiny for purposes of license extensions,” and “whether, apart from the review undertaken when a license is extended, there are types or categories of anomalies that should trigger immediate reporting, in order to assess whether reliability of post-mission disposal has been compromised to the point that immediate actions may be required.”<sup>24</sup> Because the Commission’s existing case-by-case approach to license term extensions has worked well, and because it will be difficult if not impossible to garner industry consensus on which types of satellites or anomalies merit disparate treatment, the Commission should not pursue changes to its licensing framework in this manner.

**B. The Commission Should Not Require Operators to Encrypt TT&C Communications.**

The Commission similarly should not impose requirements related to the encryption of TT&C communications.<sup>25</sup> Operators are already subject to specific encryption obligations in certain situations. For example, the U.S. Intergovernmental Committee on National Security Systems already regulates encryption of TT&C communications for “space systems used to

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operation of the satellite, in addition to additional licensing and spectrum fees required as part of the landing rights approval.

<sup>24</sup> *Id.* ¶ 67.

<sup>25</sup> NPRM ¶¶ 74-75. For GSO satellites, the risk to the United States of a claim under the Convention on International Liability for Damage Caused by Space Objects of 1972 is extremely low. GSO operators are incentivized keep the geostationary arc clean in order to ensure future use and claims under the treaty are extremely rare. Since 1972 there has only been one claim brought—Cosmos 954.

collect, generate, process, store, display, transmit, or receive National Security Information (NSI).”<sup>26</sup> Further, encryption can result in extended service outages in the case of on-orbit anomalies with the TT&C system. Whether and how to encrypt TT&C communications is a matter best left to individual operators based on the needs of their customers, some of whom require such encryption for national security purposes. As such, the Commission should refrain from requiring the encryption of TT&C communications.

**C. The Commission Should Not Require Space Station Licensees to Indemnify the United States.**

Finally, the Commission requests comment on whether it should require space station licensees to “indemnify the United States against any costs associated with a claim brought against the United States related to the authorized facilities.”<sup>27</sup> As a threshold matter, the NPRM does not identify a legal basis for FCC authority to impose an indemnification requirement on satellite licenses or offer any legal analysis of this issue. At a minimum, the Commission should conduct such a legal analysis prior to considering regulations which mandate indemnification. This analysis of Commission authority to require indemnification should take into account the fact that the Commission’s authority to regulate “in the public interest” is not absolute. In fact, the indemnification requirement proposed here is arguably quite attenuated from the Commission’s regulation of the use of radiofrequency by space stations.<sup>28</sup>

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<sup>26</sup> See National Information Assurance Policy 12: Cybersecurity Policy for Space Systems Used to Support National Security Mission, Committee on National Security Systems (Feb. 6, 2018).

<sup>27</sup> NPRM ¶ 78.

<sup>28</sup> See, e.g., *American Library Association v. F.C.C.*, 406 F.3d 689 (D.C. Cir. 2005) (FCC lacks authority to establish rules applicable to consumer digital television reception devices governing the distribution of the transmitted content after completion of the transmission); *Illinois Citizens Committee for Broadcasting v. F.C.C.*, 467 F.2d 1397 (7th Cir. 1972) (FCC has no authority to prevent the physical construction of the Sears Tower in Chicago despite potential



In undertaking this analysis, the Commission should consider that in numerous other contexts, Congress has addressed liability and indemnification issues directly in the statute and thus clearly expressed its intent for regulatory agencies to have a role in indemnification.<sup>29</sup> However, such indicia of Congressional intent is absent from the Communications Act, which neither directly empowers the Commission to impose indemnification requirements nor speaks to U.S. government liability for activities associated with the operations of space station licensees.

The Commission's review of its regulatory authority to prescribe indemnification requirements should also take into account whether such a regime is more appropriately designed or implemented by another entity. Indeed, the NPRM acknowledges that an appropriate process for the proposed indemnification requirement is "an indemnity agreement . . . created in consultation with interagency partners, including the U.S. Department of State, to establish the

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harmful interference to the reception of television signals to viewers in the area); *F.C.C. v. Midwest Video Corp.*, 440 U.S. 689 (1979) (FCC adoption of public access requirements applicable to certain cable television systems exceeds the FCC's ancillary authority to regulate broadcast television stations); *Comcast Corp. v. F.C.C.*, 600 F.3d 642 (D.C. Cir. 2010) (FCC does not have ancillary authority to regulate network management practices of an internet service provider).

<sup>29</sup> See, e.g., 51 U.S.C. § 20144(f) (authorizing NASA to administer a program to competitively award cash prizes for innovations in the space industry and requiring that applicants to the program both "agree to assume any and all risks and waive claims against the Federal Government" and obtain an insurance policy which "indemnif[ies] the Federal Government against third party claims"); 42 U.S.C. § 2210(a) (authorizing the Nuclear Regulatory Commission to require licensees both to obtain public liability insurance and to maintain an agreement which indemnifies the licensee against public claims, and requiring the Commission to indemnify licensees for claims above a certain threshold); 33 U.S.C. § 892b (providing that "[t]he Government of the United States shall not be liable for any negligence by a person that produces hydrographic products certified [by NOAA] under [the statute]"); 36 U.S.C. § 504(c) (requiring the Presidential Inaugural Committee to "indemnify and hold harmless the District of Columbia and the appropriate department, agency, or instrumentality of the Government against any loss or damage, and against any liability arising, from any act of the Inaugural Committee or any agent, licensee, servant, or employee of the Inaugural Committee in connection with the installation, operation, or removal of a temporary overhead conductor or electrical facility").

parameters of such an agreement, including the scope of the indemnification and the means to execute the agreement, including by an appropriate U.S. government agency.”<sup>30</sup> But while the Commission acknowledges that other governmental agencies would be better suited, or even required, to design and execute indemnification agreements, the Commission does not consider if the decision of whether to impose indemnification requirements on space station licensees in the first instance would more appropriately fall to a different entity. The Commission should conduct such an analysis, particularly with respect to the Department of State.

Further, the Commission’s analysis on the propriety of an indemnification requirement for space station licensees should take into account existing requirements imposed on entities involved in space operations. As the Commission noted in its *2004 Orbital Debris Order*, the FAA has already imposed liability insurance requirements in the launch and reentry context, pursuant to express statutory authority.<sup>31</sup> The Commission should consider whether such requirements obviate the need for additional action.

Finally, the Commission should also consider the impact an unlimited indemnification requirement may have on operators and the space industry. As the Commission has recognized, “[d]riven by innovation from both established commercial enterprises and new entrepreneurial endeavors, a new landscape for the private space industry is emerging.”<sup>32</sup> The NPRM further recognizes that this new space economy is valued at more than \$383.5 billion and “present[s]

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<sup>30</sup> NPRM ¶ 78.

<sup>31</sup> *Mitigation of Orbital Debris*, Second Report and Order, 19 FCC Red 11567, ¶ 110 (citing 14 C.F.R. § 440.1 et seq. and the Commercial Space Launch Act of 1984, as amended, 49 U.S.C. § 70101 et seq. (currently codified at 49 U.S.C. § 50901 et seq.)).

<sup>32</sup> NPRM ¶ 1.

significant economic promise for our nation.”<sup>33</sup> However, onerous, complex, or unrestricted indemnification requirements will likely depress the investment and stifle the innovation that has propelled the present space industry. Under the proposed rule, limitless indemnification could, for example, have crippling financial implications for a licensee in the event of a claim against the United States, regardless of fault.<sup>34</sup> Forcing such a financial risk onto U.S. licensees would be a significant deterrent to U.S. investment, innovation, and licensing.

The Commission should carefully consider each of these factors prior to imposing any indemnification requirement on space station licensees.

## **VI. CONCLUSION**

In view of the foregoing, Intelsat urges the Commission to consider the matters presented in this proceeding consistent with the comments provided herein.

Respectfully submitted,

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<sup>33</sup> *Id.*

<sup>34</sup> Intelsat is unaware of an existing insurance policy that would provide limitless coverage. Even if such a policy existed, it would likely be prohibitively expensive.