



FEDERAL COMMUNICATIONS COMMISSION

47 CFR Parts 5 and 100

[SB Docket No. 25-306; FCC 26-47, FR ID 373984]

Space Modernization for the 21st Century

AGENCY: Federal Communications Commission.

ACTION: Proposed rule.

SUMMARY: In this document, the Federal Communications Commission (Commission or we) adopts a Further Notice of Proposed Rulemaking (*FNPRM*) that seeks comment on and/or proposes additional reforms.

DATES: Comments are due **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Reply Comments are due **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

FOR FURTHER INFORMATION CONTACT: Carolyn Mahoney, Acting Division Chief, Satellite Programs and Policy Division, at carolyn.mahoney@fcc.gov or 202-418-7168 or Brandon Padgett, Acting Associate Division Chief, at brandon.padgett@fcc.gov or 202-418-1377.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Further Notice of Proposed Rulemaking (*FNPRM*), in SB Docket No. 25-306; FCC 26-47, adopted July 22, 2026, and released July 23, 2026. The full text of this document is available for public inspection online at <https://docs.fcc.gov/public/attachments/FCC-26-47A1.pdf>. The document is also available for inspection and copying during business hours in the FCC Reference Center, 45 L Street NE, Washington, DC 20554. To request materials in accessible formats for people with disabilities, send an email to FCC504@fcc.gov or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (TTY).

Regulatory Flexibility Analysis

The Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) concerning the potential impact of rule and policy change proposals on small entities in the *FNPRM*. The IRFA is set forth in Appendix D of the document. The Commission invites the general public, in particular small businesses, to comment on the IRFA. Comments must be filed by the deadlines for comments on the

FNPRM indicated on the first page of this document and must have a separate and distinct heading designating them as responses to the IRFA.

Paperwork Reduction Act Analysis

The *FNPRM* may contain new or proposed modified information collections. The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public and OMB to comment on any information collections contained in this document, as required by the Paperwork Reduction Act of 1995, 44 U.S.C. 3501-3521. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, 44 U.S.C. 3506(c)(4), we seek specific comment on how we might further reduce the information collection burden for small business concerns with fewer than 25 employees.

OPEN Government Data Act

The OPEN Government Data Act requires agencies to make “public data assets” available under an open license and as “open Government data assets,” i.e., in machine readable, open format, unencumbered by use restrictions other than intellectual property rights, and based on an open standard that is maintained by a standards organization. This requirement is to be implemented “in accordance with guidance by the Director” of the OMB. The term “public data asset” means “a data asset, or part thereof, maintained by the federal government that has been, or may be, released to the public, including any data asset, or part thereof, subject to disclosure under the Freedom of Information Act (FOIA).” A “data asset” is “a collection of data elements or data sets that may be grouped together,” and “data” is “recorded information, regardless of form or the media on which the data is recorded.”

Providing Accountability Through Transparency Act

The Providing Accountability Through Transparency Act requires each agency, in providing notice of a rulemaking, to post online a brief plain-language summary of the proposed rule. Accordingly, the Commission will publish the required summary of the *FNPRM* on <https://www.fcc.gov/proposed-rulemakings>.

Synopsis

I. INTRODUCTION

1. Achieving American space superiority is critical to our nation’s future. As explained by Executive Order 14369 in December 2025, “[s]uperiority in space is a measure of national vision and

willpower, and the technologies Americans develop to achieve it contribute substantially to the Nation's strength, security, and prosperity." While the United States is already the world leader in commercial space, the industry is rapidly moving to build the space infrastructure of the future. Therefore, as part of our Build America Agenda, the Commission is aggressively moving to support commercial deployment of space infrastructure which promises enormous downstream benefits to American prosperity and security.

2. In pursuit of this goal, the Commission must ensure the United States is the best place for the space industry to build, operate, and license. Today's commercial space industry is rapidly innovating, requiring a regulatory framework which provides speed, predictability, and flexibility. Therefore, in this *Order*, the Commission moves forward with modernizing our rules to build a space "licensing assembly line" and adopting a new part 100. Like a physical assembly line, our new processes will move licensing requests in standard and predictable ways and result in increased efficiency and a higher quality of Commission review. By reforming our licensing and operating rules, the Commission complements its other ongoing activities to boost the space economy.

II. BACKGROUND AND OVERVIEW

3. *Background.* In the accompanying *Order*, the Commission generally adopts the framework proposed in the *NPRM*, albeit with some changes. As provided in Appendix A of the document, the Commission adopts a new part 100. Within part 100, we clearly distinguish the rules for the application and review process (subpart B), for operations under an authorization (subpart C), and for enforcing compliance (subpart D). Subpart A generally applies across part 100. Whereas part 25 is a confusing tangle of application and operational rules, with the new part 100 organization, we enable operators to easily understand the application process and the standards under which they must operate. Such organization will also allow the Commission to make orderly changes to part 100 over time as necessary.

4. *Further Notice of Proposed Rulemaking.* With part 100 establishing the comprehensive framework, we seek further comment on several areas the Commission may consider to further refine these rules in the Further Notice of Proposed Rulemaking (*FNPRM*).

III. FURTHER NOTICE OF PROPOSED RULEMAKING

5. Part 100, as adopted, provides a set of rules governing the licensing and operation of space and

earth stations. With this framework in place, we now look to additional areas in which we can further modernize the Commission's rules to promote American space dominance in the *FNPRM*.

6. In particular, we seek to refine the operational rules in subpart C to build "operational envelopes" in which licensees have greater flexibility. Rather than requiring applicants to specify exact technical or operational parameters in their applications which may require multiple modifications or amendments as operations change, operational envelopes would allow applicants to request broader authority and change operations within that envelope without further permission from the Commission. This approach could have considerable benefits by allowing applicants more flexibility in designing and operating their systems without the need for additional authorization from the Commission. Therefore, in addition to other topics, we seek comment in the *FNPRM* on how we might create such operational envelopes. While we primarily seek specific comment on certain specific questions and proposals, we also seek general comment on revising our operational rules to promote flexibility and "operational envelopes."

A. Space-Based Experimental Licensing

7. We propose to create a new type of space and earth station license for developing or experimental technologies. This experimental license would provide companies a clear and predictable pathway to a short-term license for the purpose of testing new technology or providing proof of concept before moving to commercial operations. We believe that this would be beneficial for the American space industry because it would provide a distinct set of rules tailored for space companies from the developmental stage through the commercial and operational stage. It would also increase the Commission's administrative efficiency by applying a consistent licensing framework to all space and earth station licenses. We seek comment on this proposal.

8. The Commission currently bifurcates the application process for certain space station and earth station applications between part 5 and part 25. Part 5 of the Commission's rules contains the regulations pertaining to filing for applications in the experimental radio service. It is limited to stations conducting experiments, technical demonstrations, product development, and market trials. Part 5 is also applicable to all experimental stations, including terrestrial, aeronautical, and nautical, not just space and earth stations. This dual structure often creates confusion for applicants as to whether they should apply under the part 5 or part 25 rules. For example, operations do not always fit neatly within the parameters of a part

5 license because an applicant may be testing a new satellite with new capabilities for a service within which it already has a license to provide commercial service. This often leads to back and forth between the applicant and the Commission to determine the appropriate application filing procedures—part 5 or part 25. By creating a unified application process under a singular set of rules, we believe we can provide clarity to the applicants, alleviate delays, and reduce the administrative burden on limited FCC staff resources.

9. Specifically, we propose to consolidate all space-related experimental applications under a single licensing process. We envision these applications, currently filed in the Experimental Licensing System (ELS) under the part 5 rules, would instead be filed pursuant to part 100. We seek comment on this proposal. Would this application process be beneficial for space companies? We believe that keeping this proposed application pathway relatively broad—i.e., experimental licensing would encompass both true experiments of new technology as well as testing technology upgrades and features further along in the developmental process—is a better path to applicants with the freedom to organize their license applications in a way that is most beneficial to their specific needs and priorities. We seek comment on creating a single process for all earth and space station licensing.

10. To implement this new licensing framework, we propose to create a new subpart J in the existing part 5 experimental licensing rules. These rules would be specific to space-related experimental licensing. Under this framework, all experimental license applications would continue to be filed under the provisions of part 5, but initial processing of space and earth station applications would be conducted by the Space Bureau, where staff have specific earth and space station-specific engineering and licensing knowledge. We believe that this approach would ensure that the rules for space-related experimental licenses reside under the Commission's larger experimental radio service framework, but would be sufficiently distinct to meet our goal of providing a unified process for space-related experimental applications to receive streamlined processing and expeditious review. Further, we propose that specific space-related rules would only reside in part 100 with cross-references to those rules in the new part 5, subpart J. For example, the current part 5 rules contain special provisions for satellite licenses. We believe licensees would benefit from a single consolidated rule part for all space-related provisions so that all such licensees have consistent guidelines while also keeping the Commission's overall experimental

framework consistent. We seek comment on this approach. Are there alternative placements for space-related experimental rules, such as in the new part 100? If the new space-related experimental licensing rules are placed in part 100, should applicants have a choice of filing under the new part 100 rules or the existing part 5 rules? If a proposed experiment incorporates both space operations and terrestrial or aeronautical operations, would an applicant need to obtain experimental licenses under both part 5 and part 100? Or would applicants be required to obtain two experimental licenses—one for space-related operations and one for all other operations? If the new space experimental licensing rules are placed in part 5, should we cross-reference in part 100 to the experimental rules in part 5? If we create a new subpart in part 5, are there any modifications to other portions of part 5 that we would need to make? Are there any other changes we should make to part 5 to accommodate these new space experimental licenses?

11. Related to this proposal to maintain the space-related experimental licensing rules under part 5, we also propose that such licenses would fall under the general part 5 rule provisions applicable to all experimental licensing. This includes § 5.71, which provides for a two-year license term, but allows up to five years with sufficient justification. Similarly, space-related experimental operations would also be subject to § 5.84, which permits experimental operation to only be conducted on an unprotected and non-interference basis. If applicants seek interference protection for their operations, they would need to file a part 100 application. We seek comment on this proposal. In keeping with this approach, we propose that space-related experimental applications and operations comply generally with the application and licensing provisions in part 5, subpart B. In addition to the provisions already noted, this includes, *inter alia*, requirements to notify the National Radio Astronomy Observatory when operating in certain locations, cancellation provisions, and procedures for informal objections. Are there portions of subpart B that should not apply to space-related experimental operations? Do certain provisions in subpart B need to be specifically modified for space-related operations? We similarly propose to update other rules in part 5 to either reference part 100 rules or incorporate provisions specific to space-related experimental operations. Specifically, commenters should review part 5, subparts A (General), B (Application and Licensing), and C (Technical Standards and Operating Requirements), as well as subpart H (Product Development and Market Trials), and provide their view on the applicability or changes needed for each

of those rules. Are there additional provisions or restrictions that we should incorporate into the new rules?

12. Because experimental licenses are issued on an unprotected and non-interference basis and for limited duration, they are not placed on public notice for comment prior to grant. Consistent with this practice, we propose to not place space-based experimental license applications on public notice, although these license applications will be publicly accessible for review. We seek comment on this proposal. Is there a need for some sort of public notice for these proposed types of applications? We also propose to require applicants to submit all information required to adequately describe the specific type of system they seek to operate, i.e., an earth station, an NGSO satellite system, a GSO satellite system, or a VTSS. Again, this is similar to the current process for a part 5 application where applicants must provide location, frequencies, power, and emissions information, as well as, for space stations, additional satellite specific information regarding orbital debris mitigation. We seek comment on this proposal. Is there additional information that applicants should be required to submit? Should applicants only be required to submit a subset of information required for a regular part 100 license because their operations would be for a short duration and on an unprotected and non-interference basis?

13. We propose to require applicants to certify that the operations under the license will only be for the purpose of testing, experimentation, demonstration, or validation consistent with the part 5 rules, including the provisions permitting product development and market trials. We seek comment on this proposed criteria for qualifying for a license. We seek comment on whether the provisions for development and market trials need to be modified to accommodate space-based experimental operations. Specifically, we note that those rules require that “trial devices are either rendered inoperable or retrieved by them from trial participants at the conclusion of the trial. Licensees are required to notify trial participants in advance that operation of the trial device is subject to this condition.” Is this practical for a satellite or an earth station? Are there other criteria that would better accommodate the needs of space-based experiments? Often, space and earth station applicants under part 5 are under contract with the federal government. Should we specifically include experiments under contract with the U.S. government as within the new license type?

14. We also propose to create a process by which an experimental license may be converted to a

regular part 100 license upon request by the licensee and action by the Commission. We believe that this would solve the problem that currently exists where a part 5 space station licensee desires to provide commercial service under part 25 rules and either must file a completely new license application or the Commission must incorporate the part 5 licensed satellites into a part 25 license. Licensees who test and validate their satellites or earth stations and wish to operate longer than the initial limited license term would be able to submit a request to the Commission to convert to a part 100 authorization. We anticipate treating these requests as an application for major modification and placing them on public notice so that interested parties can comment. The application would then proceed along the same review process as we will use for regular part 100 applications. We expect that applications to convert an experimental license to a regular part 100 license that do not seek additional interference protection could be granted quickly, based on successful operations under the existing experimental license. We seek comment on this proposal. Should we create a specific process for converting an existing experimental license into a regular part 100 license? Or should we treat it as a major modification? Are there other conversion-related considerations for which we should account?

15. We seek comment on our proposals generally and also seek comment on whether alternate approaches would better suit space-based experimental licenses. Parties should address the relative costs and benefits of any particular approach for where and how we codify the new rules.

16. We tentatively conclude that the proposal to have the Space Bureau conduct initial processing of experimental space and earth stations would save approximately \$66,000 per year in review costs for Commission staff by offering substantial administrative and operational efficiencies that would allow us to streamline the licensing process for space and earth stations. We seek comment on this estimate. Additionally, we believe that adopting a consolidated application pathway that expedites Space Bureau review would provide a more easily understandable process for applicants that minimizes processing-related delays, thereby lowering the administrative burden. We seek comment on this assessment and on additional benefits and costs that may be associated with this proposal.

B. NGSO Call Sign Merging

17. The *NPRM* proposed to allow NGSO satellite system operators to combine authorized satellites currently operating under multiple call signs into one NGSO satellite system under one call sign.

Commenters broadly supported this proposal. We believe that this could help applicants decrease the number of licenses that must be maintained, providing greater flexibility and modularization. We seek further comment on this proposal. What are the benefits to applicants of maintaining fewer licenses? We encourage commenters to provide specific examples, as well as any estimates of potential administrative time savings due to improved flexibility or reduced burdens. Additionally, should we require applicants to submit a request with the Commission asking that multiple current NGSO satellite systems under separate call signs be merged into a single NGSO satellite system with a single call sign? We seek comment on this.

18. Some commenters were concerned that a single call sign per NGSO satellite system could cause confusion with existing license holders. In the *Order*, we adopt a new definition of NGSO satellite system that is applicable on a prospective basis. Current licenses that contain multiple call signs for a single NGSO satellite system would not be affected. But in the *FNPRM*, we seek comment on whether we should give licensees the option to request that the Commission consolidate the call signs so that there is only one call sign for the NGSO satellite system. This would give current license holders the assurance that their license terms would not be affected unless they requested a change but also would give them the flexibility to consolidate under a single call sign. We seek comment on this proposal and these assumptions. Are there any potential costs or other harms from allowing applicants to consolidate call signs? In addition to pre-existing licenses prior to the adoption of part 100, should we allow licensees that receive licenses after the adoption of part 100 to consolidate call signs in the future? Should we adopt a standard process for NGSO satellite system licensees to consolidate multiple NGSO satellite systems under a single call sign? If so, is it sufficient to allow applicants to request a merger and let the Space Bureau decide whether the separate NGSO satellite systems should qualify as a single NGSO satellite system?

B. Earth Stations

19. In the *NPRM*, we sought comment on various changes to the way the Commission licenses earth stations. Commenters provided an extensive record. Based on that record, we seek further comment on ways in which we can update and revise the licensing process for earth stations. In particular, we seek to further identify whether to define operational envelopes in which operators can have greater flexibility

without requiring additional permissions or modifications. We generally seek comment on this issue.

20. Currently, the Commission's rules do not include a specific definition for "site" as it relates to earth stations. Although we anticipate that sites will be registered on an antenna-by-antenna basis for Immovable Earth Stations, the rules vary in how a site can be defined. Accordingly, should we establish a single uniform definition of "site" as it relates to earth stations? If so, how would that impact coordination with other users of spectrum? Should this definition also apply to blanket licensed earth stations such as ESIMs or User Terminals and if so, how?

21. Further, as discussed in the *Order*, the Commission's part 100 rules do not change the classification or definition of various consumer apparatus that we have traditionally regulated as "earth stations." For example, our part 100 rules do not define user terminals, and they continue to classify user terminals and SCS handsets as a "earth stations." We seek comment on all potential rule changes to that end. Should we establish a formal definition of user terminals that codifies the one provided in the *Order*? More fundamentally, are user terminals or handsets properly considered "earth stations," a category which traditionally referred to fixed infrastructure requiring professional installation and operation by telecommunications providers? Alternatively, should we adopt a new category of lightweight consumer-facing equipment to be authorized in bulk through our equipment authorization processes, without retrofitting our definition of "earth station" or requiring part 100? Because we are now regulating ESIMs and user terminals under the same rule part, should we create a new class of earth station that encompasses them both under a single definition? We seek comment, for example, on a "Nomadic Terminals" definition that could include ESIMs, along with user terminals, consumer handsets, IoT devices, and other portable, non-industrial equipment, and the terminals under this definition would be regulated based on how they are used. For instance, should there be different requirements for terminals continuously in motion or on a plane or on a vessel, as opposed to those that are normally fixed but theoretically capable of being relocated? Should we adopt this two-tier approach? Would combining ESIMs and user terminals under a single definition reduce the confusion and the redundancy that applicants face when applying for licenses?

22. At the same time, we think that the definitions related to ESIMs warrant a more robust change to reflect the new technology that did not exist when the ESIM rules were established. For instance, the

definition of an ESIM could be read to include cellular phones operating on FSS to communicate with a satellite if used from an Earth Station on Vessel (ESV), Vehicle-Mounted Earth Station (VMES), or ESAA. Alternatively, the definition of VMES is tied to a motor, which could imply that persons who require the use of a motorized wheelchair must comply with the VMES specific rules if they choose to operate a cell phone that communicates with a satellite or a terminal providing service to a laptop that they are using while moving. Accordingly, we think the time is ripe to revisit ESIMs generally. Therefore, we seek comment on how we should revise the ESIM definitions to better account for today's technologies. Does the adoption of a new "nomadic terminals" definition solve much of the issues around ESIMs? If so, how should we account for things like ESAA or ESVs that are also subject to international treaties? Would establishing envelopes for technical rules, similar to what we propose for off-axis EIRP and antenna gain be necessary if we update these definitions? Are there specific treaty or international factors that must be accounted in relation to ESIMs? For instance, vessels and airplanes are subject to international treaties. How might that interact with ESIMs revisions?

23. We seek specific comment on changes that would provide regulatory clarity for unmanned aircraft systems (UAS or drones). We confirm that a drone may qualify as an ESIM and utilize eligible spectrum under our part 25 and 100 rules to the extent that it sends or receives radiofrequency (RF) signals to or from an authorized FSS satellite system. At the same time, our past decisions have not specifically considered UAS as a discrete species of ESIM, whether an ESAA or VMES or some other category, given the nascency of the drone industry. Should we now do so? We seek comment on updating our definitions to accommodate UAS connectivity from satellite systems and related issues. Are the prescriptive technical requirements we previously adopted for ESAA use, largely designed for the commercial and private aviation context, appropriate for UAS? Given their lower operating altitude and proximity to the ground, are drones better regulated or classified as VMES? Does UAS present different or fewer interference considerations than those we previously considered for ESAA or VMES? Given its ubiquity and lower cost, is UAS more akin to or better regulated as consumer-facing equipment, such as user terminals or SCS handsets? What, if any, licensing requirements should govern UAS above and beyond those that apply to user terminals? Absent formal rule changes, should the Commission provide further clarity about the treatment of UAS under part 100? To the extent necessary, we delegate such

authority to the Space Bureau. To foster a competitive drone connectivity market with multiple providers and minimal barriers to entry, it is the Commission's overarching goal to provide spectrum access to a diverse array of UAS operators using all eligible frequencies, without the need for individualized licensing or a heavyweight technical envelope. We therefore seek comment on any and all changes to meet that objective, including to our definitions, to give UAS a pathway toward spectrum abundance.

24. We also seek comment on if the technical rules and limitations that apply to ESIMs warrant revisions. Are the rules currently applicable to ESIMs too restrictive? How can we revise them to make them more permissive and adaptable to new technologies? Should we revise them at all?

25. We also recognize that the number of different types of earth stations in the Commission's rules can create confusion as to which earth station type applies to a specific application. This in turn creates confusion as to which technical rules apply. As earth station types continue to converge, such as in the direct to device context or the User Terminal and ESIM context, we foresee this issue amplifying. Therefore, we seek general comment on if there are ways in which we can condense and streamline the number of different types of earth stations that exist in our rules. If so, which definitions could be combined or removed? Any proposal to combine or remove definitions should provide an explanation of how the Commission should address associated technical rules. In addition, we seek comment on whether the definitions in the Commission's rules cause confusion with how certain terms are used internationally? Does this cause confusion among regulatees as to what we are regulating when we classify earth stations in a more specific manner than the international community? We seek comment on these questions and welcome proposals for other suggestions where we can streamline or condense the Commission's rules and definitions as it relates to earth station subgroups.

26. As it relates to earth station radiofrequency exposure reports and associated technical showings, SpaceX suggests that we align the Commission's rules for earth stations with the part 2 rules. We do not make that change in the *Order* because it would require changes to part 1 of the rules and because the record on this issue is not sufficiently developed. We now seek comment on SpaceX's suggestion. Should we align the coordination rules and the associated technical showings with the part 2 rules and only require that an applicant certify to compliance with the part 2 limits in the application but require that technical showings be provided upon request by the Commission? If so, why should we adopt this

approach? If not, what are the issues with adopting this approach and the impact it has on giving the public sufficient information about an earth station? Is providing this information redundant with other processes that earth station applicants already do? We seek comment on these questions and welcome other comments related to this proposal.

27. In the *Order*, we eliminate the ability for applicants to receive U.S. market access via earth station, although we allow STAs for certain categories of short-term uses including brief, non-recurring activities such as LEOP, in-orbit testing, and orbit changes. Some commenters suggested that there be an expedited mechanism for a grant of market access via earth station for specific operations, including for communications that would involve TT&C only, earth stations aboard aircraft that do not have a U.S. space station license, or data-only downlinks, generally or for earth observation. Other commenters suggested we establish streamlined market access entry to enable the ground station as a service business, in order to promote U.S. leadership in this new business model. We seek comment on these proposals, specifically on an expedited mechanism or other streamlined process for market access via earth station. We ask for comment on how such processes might work, what classes of communications should be included, and how to ensure that any such framework would not compromise national security or otherwise affect the interference and orbital environment. We also seek comment on whether a specific streamlined process or exemption is needed for satellites or space stations that do not communicate with the Contiguous United States (CONUS) but with a limited subset of teleports, for example, in the Pacific Islands, including Hawaii or Guam. Is a streamlined process needed for earth stations communicating with non-U.S. space agency satellites? Commenters are encouraged to include examples from other administrations, and whether reciprocity from the satellite licensing administration should be a condition of receiving U.S. market access via this regime.

28. Further, we revisit the discussion from the *NPRM* and again ask whether we should retain the rules relating to receive-only earth stations. We elect not to remove the rules in the *Order*, largely due to the ongoing C-band auction proceeding. In light of the C-band auction likely coming to a close in the near future, we seek comment on whether we should remove the receive-only rules from our part 100 rules. Specifically, given that the Commission determined that it was unnecessary to license receive-only earth stations communicating with U.S.-authorized space stations, and instead only register them if requested,

is this rule part necessary? Should the rule be kept for operations with non-U.S.-licensed space stations that either do or do not have market access? If so, we invite commenters to provide details as to how and why. In addition, we invite comment on how we should treat existing rule parts that limit the receive-only protections available to those already registered, such as in C-band. To avoid confusion, we do not invite comment on the requirement that a receive-only earth station receive a license before receiving from a non-U.S. licensed space station.

29. Finally, regarding the Nationwide, Non-Site license we adopt in the *Order*, many commenters proposed that we allow for Nationwide, Non-Site licenses in cases where a waiver is requested. We elected not to do so broadly in the *Order*—limiting only to allowing waivers of the U.S. Table of Frequency Allocations—as we believe that a determination of what other waivers should be allowed for this license requires further discussion. Accordingly, we seek comment on whether we should allow applicants who request a waiver, other than for the Table of Frequency Allocations, to apply for a Nationwide, Non-Site license and if so, which waivers should we allow? For instance, are there waivers that pose little risk that could be applied across the nation without special review being necessary? We note that some commenters suggested that routine waivers be permitted. What would constitute a routine waiver given that waivers are meant to be reviewed on a case-by-case basis? What are the costs and benefits of adopting this approach? We seek comment on these questions generally. We ask that commenters provide specific examples of waivers we have granted in the past that could fit within the scope of the questions we ask here.

D. Modifications

30. We seek comment on whether we should allow space station licensees to change or add RF sensing capabilities through a minor modification or notification process instead of requiring a major modification application. HawkEye 360 requested that the Commission include adding or changing RF sensing capabilities as a modification that could be made via notification only, arguing that there is no possibility of interference from these activities. We elected not to adopt this proposal in the *Order* because we believe it requires a more extensive record given the possibility of these sensors experiencing interference and accordingly seek comment on this idea. Are there any concerns with adopting this approach given the claim that there is no chance of interference from these activities, recognizing that

these sensors could be interfered with? What are the benefits or drawbacks of adopting this proposal? We seek comment on these questions. Commenters are encouraged to provide recommended rule text in response to these questions

31. We also seek comment more broadly on the list of major and minor modifications that we adopt in the *Order*. Could the list of major modifications be streamlined to give more flexibility to operators? If so, which specific major modifications should be removed? Are there ways to move one or more categories of major modifications to the minor modifications, such that the changes could be made either after notifying the Commission or prior to notifying the Commission? Are there other general types of modifications that the Commission should specify may be made without prior authorization? Commenters are encouraged to provide possible regulatory text in response to these questions.

E. Hosted Space Stations

32. In the *Order*, we adopt changes to the Commission's rules related to hosted space stations. The changes are limited to U.S.-licensed hosted space stations onboard U.S.-licensed host space stations and do not extend to non-US licensed hosted space stations. We seek comment on whether to extend this framework to non-U.S.-licensed hosted and host space stations. Specifically, should we allow U.S. space station licensees to add a non-U.S.-licensed hosted space station to their authorization via the notification process we adopt in the *Order*? Would this be giving non-U.S.-licensed operators a means to avoid the market access process? Or could we allow the equivalent of the hosted space station license for market access? Should we allow this for non-U.S.-licensed hosted space stations that do not seek to communicate with any earth stations located in the United States? Should we allow U.S. market access recipients to add a U.S.-licensed hosted space station via the notification process? Should we allow U.S. space station operators to obtain a hosted space station license for operations on a foreign-licensed spacecraft without market access? If so, should we require the U.S.-licensed hosted space station applicant to show that the foreign-licensed host spacecraft complies with the Commission's orbital debris rules? What requirements, if any, that differ from what we adopted in the *Order* would be necessary to allow these different license arrangements? We seek comment on these questions and any other benefits, concerns, or issues that this proposal may present.

33. We also seek comment on whether the rule we adopt for hosted space stations could provide more

flexibility to support multiple licensing structures and hosting models. For example, should we allow for either the host space station or the hosted space station to hold the FCC license that includes the Schedule O that its partner applicant incorporates? Should we further allow host space station systems to file applications on behalf of the hosted space station, in addition to allowing hosted space stations to file on their own behalf? Additionally, to support situations that differ from the traditional hosted space station model, could this rule be used to promote software-defined payloads? Specifically, could this rule, or a modified version, allow situations enabled by software-defined payloads where the FCC-licensee of a spacecraft permits another licensee to operate on frequencies using a single antenna on the host's spacecraft? Given developments in software-defined radio technology, providing this flexibility could allow hosts to facilitate frequency use by one or more clients on the same space station equipment. Could the Commission issue a license to the underlying operator of the spacecraft with the software-defined antenna and then issue a separate license to another entity that will be using some of the frequency bands in which the antenna is capable of operating? Would it be beneficial for the Commission to allow for this arrangement? What information might the Commission need to assess potential harmful interference resulting from these types of operations? Should the licensee of the space station that is in control of the physical operations of the satellite(s) be the one ultimately responsible for any harmful interference? Would it be better to only issue a single license for the software-defined payload, or the satellite system that is comprised of many satellites with these antennas, to the satellite operator—i.e., the one with physical control of the satellites—and then the operator is able to lease capacity or establish whatever business arrangements it finds to be in its interest? Because the Commission's licensing is apparatus-based, can the Commission issue separate licenses for a single space station that cover only certain frequencies in which the space station is capable of operating?

F. Ephemeris Data Sharing and Reporting

34. The need for precise and frequent reporting of ephemeris data for satellites operating in LEO is critical to enable more productive and safe use of space. In the *Order*, we take a meaningful step towards enhancing space safety by requiring licensees and market access grantees to share their ephemeris data. This was based on extensive commenter feedback. Commenters were largely supportive of the proposal to require operators to share ephemeris data. Commenters also suggested or proposed additional

requirements regarding ephemeris data sharing, including recommended cadence of reporting, required data transmission format, and tailoring reporting requirements to specific orbital regimes. We seek comment now on potential future requirements for ephemeris sharing to enhance space safety. Should we require updated information to be shared more frequently than the eight hour timeframe we encourage in the *Order*? If so, how frequently? Should we require operators engaged in certain activities, like RPO or servicing, to share ephemeris data more frequently than other operators? If so, how frequently?

Additionally, should we require operators engaged in RPO to provide notice to the Commission a specific amount of time prior to beginning the RPO? Are there technical limitations that might make it more difficult for certain satellite operators to share ephemeris data more frequently? Should we phase in more frequent reporting requirements over a period of time?

35. We also seek comment on creating a process whereby the Space Bureau could certify qualified, private ephemeris tracking systems as sufficient for the purpose of complying with our rules on ephemeris sharing. We believe this could allow the space situational awareness business to develop independently while ensuring that operators licensed by the Commission are sharing ephemeris information in an appropriate manner to advance space safety. This would also provide flexibility for operators so that they have several options for complying with the Commission's rules. They can then choose which of the SSA providers or ephemeris tracking systems best serves their needs rather than being forced to submit information to one specific provider chosen by the Commission. Would this process promote space safety? Alternatively, should the Commission specify one single provider or site for operators to share their ephemeris data? Would specifying a single provider make it easier for new entrants or less sophisticated operators? If the Commission delegates authority to the Space Bureau to certify qualified ephemeris tracking systems, what criteria should the Bureau consider in the certification process? Should the Commission require any certified private ephemeris tracking systems to make ephemeris information freely available to all satellites operators so that there is not an additional technical burden for operators and conjunction screening services? We believe this certification process could provide clarity for operators so they know how to satisfy the requirements in the Commission's rules and would offer an "official" list of credible tracking systems that operators can rely upon. We seek comment on this assumption and these general questions.

36. We also seek comment on additional information to require as part of the space system safety reports. Should these reports include information regarding disposal failures, or satellites that are unable to maneuver as intended? Should these reports collect information related to high-risk events, passivation and end-of-life activities, or debris release? Should the information be collected in a more standardized format? We seek comment on these questions as well as any additional information that should or should not be included in these reports.

G. Inter-Satellite Service Links (ISLs) Between U.S.-Licensed and Non-U.S.-Licensed Satellites

37. Currently, the Commission does not have rules for the licensing of communications via inter-satellite service links between U.S.-licensed and foreign licensed space stations or spacecraft. We recognize that these types of operations could pose security risks. We therefore seek comment on the types of issues that the Commission should be concerned with and how to address them. We also seek comment on the most appropriate mechanism for licensing these inter-satellite links. Should we require a market access grant for any foreign licensed satellite system that will operate inter-satellite links with a U.S.-licensed satellite system, even though the foreign licensed system will not be communicating with any earth station within the United States? Could a light-touch framework for authorizing such communications, using certifications, be developed that would still satisfy security risk concerns? Alternatively, for U.S.-licensed satellite systems that seek to operate inter-satellite links with a foreign licensed satellite system, should we require a modification application that outlines the ownership and operations of the foreign licensed system? If the U.S.-licensed satellite system is already authorized to operate in the frequency bands with which it seeks to communicate via inter-satellite links with a foreign licensed system, should we allow the U.S.-licensed system to simply file a notification prior to beginning operations that identifies the foreign satellite system? Should there be a restriction of systems that U.S.-licensed systems may communicate with based on the country where the foreign system is licensed?

H. Frequency Reuse

38. Section 100.211(d) requires all space stations in the FSS operating in any portion of the 3600-4200 MHz, 5091-5250 MHz, 5850-7025 MHz, 10.7-12.7 GHz, 12.75-13.25 GHz, 13.75-14.5 GHz, 15.43-15.63 GHz, 17.3-17.8 GHz, 18.3-20.2 GHz, 24.75-25.25 GHz, or 27.5-30.0 GHz bands, including feeder links for other space services, and in the BSS in the 17.3-17.8 GHz band (space-to-Earth), to

employ state-of-the-art full frequency reuse, either through the use of orthogonal polarizations within the same beam and/or the use of spatially independent beams. Given the growth in the use of spectrum by the FSS and BSS, we seek comment on requiring full frequency reuse for all FSS and BSS operations in bands allocated to FSS and BSS as a general rule, instead of in the bands listed in § 100.211(d). This also includes feeder links for other space services. Are there any frequency bands where the technical limitations make this challenging? Are there specific benefits to not requiring frequency reuse across all FSS and BSS operations?

I. Orbital Debris Mitigation

39. *LEO.* Spacecraft monitoring and collision avoidance is important for a safe operating environment, not just during mission operation but also after end-of-mission. NASA notes that it is preferable for spacecraft to retain collision risk reduction capabilities including during de-orbit phase. We seek comment on a potential certification or requirement for spacecraft monitoring and collision avoidance capabilities for each spacecraft throughout its orbital lifetime, including end-of-mission, until re-entry.

40. *Beyond LEO.* Section 100.111(d)(2)(iii) requires NGSO satellites to be 10 cm or larger in the smallest dimension in order to be presumed trackable. NASA notes that object trackability is a function of many factors, but most notably of orbital altitude, and that the 10 cm minimum is insufficient to ensure trackability for spacecraft at altitudes above LEO, or 2000 km. NASA further notes that for spacecraft above LEO, such as in MEO or GEO, a 1 meter minimum measurement should be the standard for spacecraft operating at these altitudes to be presumed trackable. We propose to adopt a presumption into § 100.261(a) that for satellites operating in MEO or GEO will be presumed trackable if each individual satellite is 1 meter or larger in its smallest dimension, excluding deployable components. We seek comment on this proposal. Should we require operators whose spacecraft will operate in highly elliptical orbit (HEO), cislunar space, or beyond the moon to certify that their spacecraft will be trackable? If so, should we adopt a different measurement other than 1 meter for a spacecraft to be presumed as trackable?

41. *Collision Risk Reduction During De-Orbit.* We seek comment on potential information requirements or presumed acceptable bright-line criteria for satellite operations specifically during the de-orbit phase. Should the Commission require satellite operators to provide information about whether the

system will maintain conjunction mitigation capabilities during the de-orbit phase? If so, what information should the Commission collect from operators and at which point should the Commission assess this data, for example, until the satellite(s) reach a specific altitude or at a certain time before demise? Alternatively, should the Commission adopt a presumed acceptable criteria requiring a certification that satellite operators will maintain conjunction mitigation capabilities until a specified altitude or time before demise? Should de-orbit requirements or criteria apply to all satellite systems or only to satellite constellations of a certain size?

J. Two-Degree GSO Spacing Requirements

42. *FSS Earth Station Performance Standards.* In the *NPRM*, we proposed to streamline the requirements in § 25.209 regarding earth station antenna performance standards. Commenters were broadly opposed and noted that it was premature to make substantive changes to the earth station antenna performance standards without establishing the necessary technical record. We now take the first step towards developing that technical record. We seek comment on whether any updates to these standards are necessary, including whether the current rule covers all current and possible future antenna types, frequency bands, and any other pertinent addition or clarification to bring the rule up to date. Are these rules overly limiting or out of date? Do they sufficiently cover all antenna types and/or operations? We seek comment on these questions and on the rule more broadly.

43. For commenters that suggest new bands or new antenna types to be added to the rule, we ask that they provide associated co-polarization and cross-polarization antenna gain in both the plane perpendicular to the GSO arc and the plane tangent to the GSO arc for various off-axis angles in the same format in which the rule is currently written.

44. *FSS Transmitting Earth Station Off-Axis EIRP.* In the *NPRM*, we also proposed to streamline the off-axis EIRP density limits for earth stations. Commenters were broadly opposed and noted that it was premature to make substantive changes to the off-axis EIRP density limits without establishing the necessary technical record. In light of these comments, in the *FNPRM*, we seek comment on whether updates are needed to the current rule to accommodate current and future sharing of the GSO arc, whether additional bands need to be included, and any other pertinent addition or clarification necessary to the rule. The responses to these questions will guide the Commission in determining whether the Commission

should initiate a separate technical dedicated rulemaking proceeding to address this and other technical issues.

45. For any new bands to be included or added to the rule, we request that commenters provide the off-axis EIRP density limits in the plane tangent to the GSO arc and in the plane perpendicular to the GSO arc for co-polarize transmissions and for cross-polarize transmissions for the various off-axis angles in the same format in which the rule is written.

K. Secondary Markets

46. In the *Order*, we adopt a new framework for processing rounds. This framework will result in clearly defined status for NGSO satellite systems, and that processing round status can have a quantifiable impact on operations. Therefore, we seek comment on the possibility of licensees or market access holders exchanging processing round status via a secondary market. Once a system is licensed in a processing round, are there ways that processing round status could be shared or exchanged with other systems in processing rounds or systems licensed outside of a processing round? While coordination already allows for operator-to-operator agreements which may incorporate market activity, exchange of a single operator's priority status would mean the status of other operators in the same processing round would change with respect to a processing round licensee who shares or exchanges their status. How might the Commission make such arrangements feasible? Would this allow for spectrum to be used more efficiently and put to higher and better uses? What might be the benefits or drawbacks to this approach? What impact would this have on the processing round framework in general? We would expect, in order to prevent spectrum warehousing and speculative applications, that any ability to exchange or transfer priority would depend on the entity having deployed a system. Would it be possible to allow a licensee in a processing round to share or exchange their position in that round without requiring the other party to the transaction to launch and operate the exact same system so as to avoid interference concerns from a major modification? We seek comment on these questions generally.

L. Renewal and Replacement Expectancies and Reassignment

47. In the *FNPRM*, we seek to build on the record developed in response to the proposals in the *NPRM* regarding renewal and replacement expectancies for space stations and earth stations. The *NPRM* proposed to include a definition of "replacement space station" within part 100 and sought comment on

whether to establish guidance on how to consider renewal expectancy for all types of space and earth stations. The *NPRM* observed that although the vast majority of renewal applications are granted, the Commission has generally reviewed applications for renewals on a case-by-case basis, which has occasionally led to protracted disputes over whether a renewal is warranted. In the accompanying *Order*, we adopt a definition of a replacement satellite in part 100 for both GSO and NGSO space stations, which largely mirrors the definition of replacement satellite that was contained in § 25.165(e). The record in response to the *NPRM*, however, was insufficient to adopt rules or guidance regarding renewal and replacement expectancies. Accordingly, we seek further comment on whether, and how, the Commission should adopt more structured renewal and replacement expectancy frameworks for space and earth station authorizations.

48. There are significant differences between GSO and NGSO space stations that affect renewal and replacement expectancies. NGSO space stations are most often licensed as part of a constellation of many individual space stations under a single call sign. Thus, one or more individual satellites may be replaced during the 20-year license term for the constellation without negatively affecting the ability of the authorized system as a whole to provide service to the public and to utilize orbital and spectrum resources. This reality is reflected in our rules regarding replacement satellites under part 100, which allow for a licensee of an NGSO satellite system to replace individual satellites in a constellation without additional approvals, so long as the replacements do not constitute a major modification. In contrast, GSO space stations have historically only been licensed as single space station with authority to utilize spectrum resources at a specific location on the GSO arc. Thus, the removal of a GSO space station from its assigned orbital location, either through removal from the GSO arc as part of an end-of-life disposal or through relocation to another location on the GSO arc through a modification of the license, ceases use of spectrum by the space station at the assigned orbital location. That orbital location and spectrum is effectively “warehoused” unless the licensed satellite is already replaced with a new satellite prior to the disposal or relocation. We seek comment on these differences between GSO and NGSO space stations as they may affect replacement expectancies.

49. The differences also extend to renewals of GSO and NGSO space stations. Because NGSO space stations are most often licensed as part of a constellation, and the 20-year license term is for the

constellation as a whole, rather than for any particular satellite in the constellation, there is logic in renewing the license for the constellation as a whole for another full 20 years at the end of license term. The constellation may have been refreshed by new satellites, given the fact that individual satellites in the constellation generally have operational lifetimes much shorter than 20 years. GSO space stations, on the other hand, have not been operated or licensed as constellations, and as a result, a single satellite operates for the entirety of the license term. Accordingly, GSO space station operators currently do not have a renewal expectancy, but rather a replacement expectancy, as well as the ability to extend the license term through a modification of the license. We seek comment on the differences between GSO and NGSO space stations, particularly as they may affect renewal expectancies.

50. In light of the differences between GSO and NGSO space station operations and licenses observed above, we seek additional comment on whether it is possible to establish a unified rule for renewals of space and earth station licenses. Particularly, does it make sense to have a single rule for renewals of NGSO and GSO space station licenses and grants of market access? What about VTSS? Although it is not currently expected that a GSO satellite is capable of continuing to operate for an additional full 20-year license term given existing satellite technology, do changes in regulation and technology affect this expectation? We note that under the rules adopted in the *Order*, it is now possible for more than one GSO space station to be authorized under a single license at an orbital location. Does this licensing change make a GSO authorization more akin to an NGSO authorization for a constellation? We seek comment on how this change could affect the renewal or replacement expectancy for GSO space stations. In addition, technology is now available to extend the operational lifetime of GSO space stations through servicing spacecraft that provide station keeping for the GSO space station beyond its license term. It is also foreseeable that in-orbit refueling of GSO space stations will become feasible in the near future. Both of these technologies could extend the operational lifetime of a single GSO satellite well beyond the initial 20-year license term and could make renewal of a GSO satellite license feasible. We seek comment whether these technological developments support renewals of GSO space station licenses for a full additional 20-year license term or for an alternative, shorter term?

60. To promote simplification and consistency across services, we propose to establish rules of general applicability on renewals that apply to all satellites and earth stations. A single standard that

applies to different services would also allow for clear and consistent review of requests for renewal of licenses, including more efficient review of multi-orbit systems. As part of such single standard, we propose that applications for renewals of space and earth station licenses include several certifications that the licensee must make, including: the licensee is continuing to use the orbital and/spectrum resources that it is currently authorized to use; the licensee is continuing to comply with the terms of its authorization; and the licensee has not operated in a manner that would cause automatic termination pursuant to § 100.302. We seek comment on this specific proposal and whether it should be expanded to include other criteria. Are the proposed certifications sufficient to ensure the most efficient use of licensed radiofrequency spectrum? If we allow renewals for GSO satellite systems, should we require the same certifications for GSO renewals as for NGSO renewals? If not, what different certifications should we require? Additionally, should there be different certifications for earth station renewals? We also seek comment on whether we should extend this standard to grants of U.S. market access for non-U.S. licensed space station in light of establishing terms for these grants in the *Order*.

61. We also seek comment on how to clarify and potentially codify our replacement expectancy for GSO space stations. There is currently regulatory uncertainty that arises when a GSO space station licensee disposes or relocates an in-orbit satellite and does not immediately surrender the license or place another satellite into the vacated orbital location that uses all the spectrum resources that were licensed for use by the satellite that was disposed or relocated. In such a situation, it is unclear whether these orbital locations or spectrum can immediately be applied for and put to use by another entity that wishes to utilize them, or whether the Commission must first issue a public notice announcing that the orbital location and frequencies are available for reassignment and establishing a future time at which the Commission will accept applications for the orbital location and frequencies. To remove this uncertainty, we propose a rule that would automatically make the orbital and spectrum resources available for reassignment unless the licensee has already put into place a new replacement satellite at the location, or within a year of the date of the disposal or relocation has relocated another in-orbit satellite to utilize all frequencies that we authorized for use by the disposed or relocated satellite at the orbital location. If neither condition is met, we propose that the Space Bureau will release a public notice making the orbital location and any unused frequencies available for reassignment and establishing a date and time that new

applications will be accepted. We seek comment on this proposal in general, as well as on the specific mechanisms and time periods proposed. Is a shorter time period, such as two weeks or thirty days, more appropriate? Should authorizations terminate immediately upon disposal or relocation? Should any orbital location and associated spectrum rights that are vacated or terminated automatically become available for new applications through ICFS at 9:00 AM Eastern Time on the calendar day immediately following the expiration of the 30-day replacement window, without requiring the Space Bureau to issue a public notice? We also seek comment on whether and how this proposal could be applied to grants of U.S. market access by foreign licensed GSO space stations.

62. This proposal intends to provide clarity to the GSO replacement expectancy policy and make it easier and faster for orbital and spectrum resources to be used to serve the public. It is also intended to prevent orbital and spectrum resources being held to the exclusion of others for an extended period of time, while providing flexibility for in-fleet redeployments and preserving the continuity of service to existing customers served by a satellite operator at a particular orbital location. It also takes into account that the ITU filing under which a GSO space station operates may be suspended, or even eventually suppressed, if spectrum resources are not used at an orbital location for a long-period of time. Clarifying that GSO licensees will have no longer than one year to bring back into use fallow orbital and spectrum resources will provide a clear path to allowing another operator to apply for and use those orbital resources in order to preserve the status of the ITU filing at the GSO location. We seek comment on these intended purposes and whether the balancing of interests of the proposed rule is appropriate.

63. We also seek comment on any alternatives to the definition of “replacement satellites” established in the *Order*. For example, should the Commission adopt a rule that expressly limits the GSO replacement to situations where a satellite has unexpectedly failed while in-orbit, or the situation where a licensee has been granted a license for a replacement satellite at the location or has already positioned another in-orbit satellite at a location licensed for use by another space station and the in-orbit satellite is capable of operating using all the licensed frequencies prior to the disposal or relocation of the licensed space station? This alternative would still permit operators to use in-orbit satellites to replace satellites that are disposed of or relocated, but it would eliminate any period where the orbital location and associated spectrum resources would be unused, except in exceptional circumstances where a satellite

unexpectedly fails while in orbit. The alternative could provide even greater certainty and speed in making sure that scarce orbital and spectrum resources are utilized to provide service to the public. We seek comment on this specific alternative, as well as any other alternatives.

M. Miscellaneous

64. *U.S.-Based Control Point.* We also seek comment on whether we should require that all space stations licensed by the Commission maintain a U.S.-based control point. We tentatively conclude that we should and we seek comment on this tentative conclusion. We recognize that the current rules require that an operator provide the contact information for a 24/7 point of contact with the authority and capability to cease transmissions, but currently, that point of contact does not themselves need to be the control point for the operations of the entire satellite system. We believe that by requiring a U.S.-based control point, we will enable licensees to be better situated to communicate with one another and respond quickly to potentially hazardous events. What drawbacks or potential burdens does this requirement place on operators? Could those burdens be relieved by third-party control points that have agreements with operators? What benefits are there to this proposal both in terms of impact on space safety and operations, and the impact to the space economy generally? Is there any reason why the Commission would not be able to adopt this proposal, either because of international agreements or limits found in the governing statutes? We tentatively conclude that there are not, but seek comment on this conclusion.

65. *Transfers of Control and Assignments.* As we continue to create efficiencies in our approval processes, we recognize that any market-based approach must establish clear rules regarding transfers of control and assignments of licenses or authorizations. Therefore, we seek comment on ways to make this process more efficient while still ensuring proper oversight of licensees. We note that the Commission already has an immediate approval process for certain wireless licenses and a deemed-granted process for certain *pro forma* transactions licensed under part 100. Although the rules include deemed granted procedures for certain *pro forma* applications, should we adopt a similar procedure for a broader class of licenses and authorizations, and if so, what category or categories should be included? If so, what restrictions or limitations should we establish to ensure proper oversight? We envision that this process would not be available for any transactions with greater than 10% foreign ownership or that request a waiver of the rules but seek comment on this. Should the rules be modeled after the wireless rules, where

specific criteria must be satisfied for an immediate grant? We invite comment on any alternatives to help ease the burdens associated with Commission approval of transfers of control and assignments that would still ensure the Commission maintains effective oversight of who holds or controls a license or authorization.

66. *Removing Application Cross References.* In the *Order*, we adopt rules for application materials which require earth station and space station requests in certain circumstances to submit additional information. Contained in §§ 100.112(d)(3) and 100.120(e), these application requirements cross reference in most instances to subpart C. And in subpart C, the rules discuss what applicants must do or submit as part of the application process. Given that subpart C should ideally contain only operational rules and not application rules, we seek comment on revising the rules to remove these cross references. Given our certification-based approach in which applicants must certify whether they will comply with the Commission's rules, we propose to convert the application requirements referenced in subpart C into operational rules rather than requiring as part of the application materials all of the showings in these sections in subpart C. Doing this would also allow us to remove all or part of §§ 100.112(d)(3) and 100.120(e) and more fully separate subparts B and C as application- and operation-focused, respectively. We seek comment on such changes. Are there particular sections where we should not make this change? While we may seek comment separately on substantive changes to the relevant rules in subpart C, here we only seek comment on this organizational question. We specifically request comments on the organization of the new part 100 rules so that it is clear to seasoned applicants and newcomers alike which rules they must follow and what information they must provide as part of an application.

67. *Closing Additional Rulemaking Dockets.* Given the sweeping overhaul of the Commission's space and earth station licensing rules that we adopt in the *Order*, as well as the broad set of topics on which we seek comment in the *FNPRM*, we tentatively conclude that it would be administratively efficient and prudent to close additional dockets related to satellite and earth station rulemakings that are moot or otherwise unnecessary. Are there additional open dockets related to space and earth station licensing that the Commission should close? There may be dockets where no further action was proposed, where the docket is largely superseded by the *Order*, or where the issues remaining in the docket are better addressed in this proceeding. For example, we believe the Commission's docket on orbital debris

should be closed because those issues are better addressed in the *FNPRM*, and therefore we propose to close it. We also propose, given the overhaul of our rules in part 100, to close the various dockets related to streamlining the Commission's space and earth station rules. We seek comment broadly on any other open Commission dockets that the Space Bureau could close. We encourage commenters to identify open Commission dockets that they believe should be closed, with specific reasons. We also encourage commenters to identify open Commission dockets related to space and earth station licensing that they believe should be kept open, with specific reasons for doing so.

68. *Processing Rounds.* We propose to modify the date on which a processing round's priority status begins under the NGSO spectrum sharing framework. Specifically, we propose to standardize the priority start date so that the ten-year priority period associated with a processing round begins on January 1st of the following year. This more uniform approach aims to help NGSO satellite systems authorized in different processing rounds more clearly understand the time periods during which they are protected from later-round systems and must protect earlier-round systems. As an example, the priority status for all NGSO satellite systems authorized to operate in a 2027 processing round would begin on January 1, 2028 and these systems would have priority over systems authorized subsequent processing rounds until January 1, 2038. We seek comment on this proposal. Does this approach provide more clarity on the sunset periods for priority status afforded through the processing round procedures? Should we instead begin the sunset period on a different date? We seek comment on any alternative suggestions to similarly improve and refine the rules within these frameworks.

69. We also seek comment on whether the Commission should adopt standardized performance measures for systems authorized in processing rounds. For example, should systems authorized in processing rounds be required to meet benchmarks of latency, signal to noise ratio (SNR), and/or spectral efficiency? Are there other measurements the Commission should consider? Would requiring performance measures further the Commission's goal of promoting innovation, or would they risk regulatory overreach and overburden innovators?

70. *Export Control Compliance.* We seek comment on whether and how our part 100 rules should expressly address obligations under U.S. export control laws, including, as applicable, the Export Administration Regulations (EAR) and the International Traffic in Arms Regulations (ITAR), in

connection with space station and earth station licensing. Should we require applicants to certify, as part of their applications, that they are aware of and will comply with all applicable export control requirements in the design, manufacture, launch, operation, and control of their systems and in any transfers of hardware, software, technical data, or services to foreign persons? We also seek comment on whether we should require licensees to maintain, and upon request make available to the Commission, records sufficient to demonstrate compliance with applicable export control laws as they relate to Commission-authorized operations.

71. We further seek comment on whether we should adopt specific rules governing the interaction between export control requirements and the Commission's licensing processes, including for transfers of control and assignments of space and earth station authorizations. For example, should we require applicants seeking Commission consent to assignments or transfers of control that involve foreign ownership to disclose whether the proposed transaction will require approval from other federal entities with export control or national security responsibilities, and if so, the status of any such reviews? Should we condition grants of certain authorizations or transfers of control on an applicant's representation that it has obtained, or will obtain prior to implementation, any necessary export control licenses or other governmental approvals?

72. We also seek comment on whether any additional safeguards are needed in light of export control considerations for U.S.-based control points and third-party control arrangements discussed above. For instance, should we require that entities operating a U.S.-based control point or providing third-party control services have policies and procedures reasonably designed to ensure compliance with applicable export controls when providing access to foreign persons, including access to command-and-control systems or related technical data? Would such requirements impose significant burdens on operators or control service providers, and if so, how might those burdens be minimized while still ensuring appropriate oversight? Commenters are invited to address any potential overlap with existing statutory or regulatory regimes, to identify any risk of duplication or inconsistency, and to explain whether explicit Commission rules in this area would improve clarity and compliance for licensees, authorized holders of U.S. market access and other stakeholders.

73. *GSO Streamlining.* We seek comment on modernizing, streamlining, and expediting our

processing of GSO space station applications. We anticipate our GSO application processing frameworks would benefit from structural updates and seek comment on ways to promote innovation and competition among GSOs and implement faster, more automated processing for GSO applications.

74. *Cybersecurity.* We seek comment on whether there is a need to incorporate cybersecurity requirements in our satellite licensing processes, including any benefits and burdens associated with such a requirement. Are there national security reasons for the Commission to gather information about or make specific requirements related to cybersecurity practices of satellite operators? If so, what information would be relevant? Observing that other federal agencies already collect information related to national security, would such a requirement in our license processes complement or duplicate requirements that already exist?

75. *Best Practices for Coexistence with Radio Astronomy.* We seek comment on incorporating into our rules bright-line criteria and best practices for coordination with U.S. radio astronomy sites. These criteria could include any required protection limits, to the extent they continue to be necessary, as well as any necessary specified operational limits and information sharing requirements for earth and space station operators to protect and coordinate with U.S. radio astronomy sites. This would facilitate the space and earth station application process by having all radio astronomy requirements in one section. Specifically, we seek comment on (1) the existing PFD limits to be achieved in specific geographic areas around U.S. radio astronomy sites, whether those limits are necessary to protect these sites, and any detrimental impact of these limits, and (2) to the extent we retain PFD limits, using detailed contours in different frequency bands that contain the limits. Outside of the locations specified in these contours, space station and earth station operators could operate in accordance with other relevant technical rules without causing interference to radio astronomy sites. If applicants plan to place any earth stations inside of the locations specified in these contours, the operator would be required to coordinate or demonstrate compliance with any adopted or retained protection requirements. Such a bright-line approach could streamline coordination with the National Science Foundation and U.S. radio astronomy sites by limiting the area where coordination is normally required to very small geographic areas and help avoid inadvertent, harmful interference. Additionally, we seek comment on a list of best practices regarding unwanted radio frequency emissions at U.S. radio astronomy sites. Specifically, we seek comment on

whether to include a recommendation that space station applicants include a characterization (via modeling or measurements) of their emissions in the 50-200 MHz range from all sources which can impact cosmic microwave background radiation, including whether such recommendation would have any inadvertent negative effects and whether it would help to prevent interference. We also seek comment on whether to require applicants to submit a summary of any other mitigation steps taken to reduce potential interference from space-to-Earth satellite transmissions and whether such summary is necessary to prevent interference. We note that there has been an extensive track record of successful implementation of mitigation techniques including the use of operational data sharing to avoid boresight encounters at radio astronomy telescopes, or the provision of high-precision ephemerides and other orbital information for radio telescopes to utilize in their scheduling algorithms to avoid the satellites. We seek comments on these approaches. Is there a technical basis for adopting bright-line criteria or information requirements regarding mitigation efforts to protect radio astronomy, or any countervailing considerations? Or should we consider information requirements for applicants to facilitate coordination with radio astronomers? Are there specific mitigation techniques that we should adopt as bright-line criteria that can receive the public interest presumption?

VI. INITIAL REGULATORY FLEXIBILITY ANALYSIS

76. As required by the Regulatory Flexibility Act of 1980, as amended (RFA), the Federal Communications Commission (Commission) has prepared this Initial Regulatory Flexibility Analysis (IRFA) of the policies and rules proposed in the *Further Notice of Proposed Rulemaking (FNPRM)* assessing the possible significant economic impact on a substantial number of small entities. The Commission requests written public comments on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments specified on the first page of the *FNPRM*. The Commission will send a copy of the *FNPRM*, including this IRFA, to the Chief Counsel for the Small Business Administration (SBA) Office of Advocacy. In addition, the *FNPRM* and IRFA (or summaries thereof) will be published in the *Federal Register*.

A. Need for, and Objectives of, the Proposed Rules

77. In the *Order* adopted today, the Commission took steps to modernize our part 100 rules to establish a regulatory framework that provides a more efficient, predictable and flexible environment for

the commercial space industry by creating a space “licensing assembly line.” In the *FNPRM*, the Commission seeks to identify additional areas in which we can further modernize our rules for small and other entities operating in this sector. Specifically, we initiate a further rulemaking proceeding seeking comment on its proposals to refine the operational rules in part 100, subpart C to build “operational envelopes” within which licensees will have greater flexibility. Rather than requiring applicants to specify exact technical or operational parameters in their applications, which may require multiple modifications or amendments as operations change, operational envelopes would allow applicants to request broader authority and change operations within that envelope without further permission from the Commission. This approach could have considerable benefits by allowing applicants more flexibility in designing and operating their systems without the need for additional authorization from the Commission. Therefore, in addition to other topics discussed below, we seek comment in the *FNPRM* on how we might create such operational envelopes. While we primarily seek specific comment on certain specific questions and proposals, we also seek general comment on revising our operational rules to promote flexibility and “operational envelopes.”

B. Legal Basis

78. The proposed action is authorized pursuant to sections 4(i), 7(a), 301, 303, 307, 308, 309, 310, and 332 of the Communications Act of 1934, as amended, U.S.C. 154(i), 157(a), 301, 303, 307, 308, 309, 310, 332.

C. Description and Estimate of the Number of Small Entities to Which the Proposed Rules Will Apply

79. The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted. The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.” In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act. A “small business concern” is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA. The SBA establishes small business size standards that agencies are required to use when promulgating regulations relating to small businesses;

agencies may establish alternative size standards for use in such programs, but must consult and obtain approval from SBA before doing so.

80. Our actions, over time, may affect small entities that are not easily categorized at present. We therefore describe three broad groups of small entities that could be directly affected by our actions. In general, a small business is an independent business having fewer than 500 employees. These types of small businesses represent 99.9% of all businesses in the United States, which translates to 34.75 million businesses. Next, “small organizations” are not-for-profit enterprises that are independently owned and operated and not dominant in their field. While we do not have data regarding the number of non-profits that meet that criteria, over 99 percent of nonprofits have fewer than 500 employees. Finally, “small governmental jurisdictions” are defined as cities, counties, towns, townships, villages, school districts, or special districts with populations of less than fifty thousand. Based on the 2022 U.S. Census of Governments data, we estimate that at least 48,724 out of 90,835 local government jurisdictions have a population of less than 50,000.

81. The rules proposed in the *FNPRM* will apply to small entities in the industries identified in the charts below by their six-digit North American Industry Classification System (NAICS) codes and corresponding SBA size standard. Where available, we also provide additional information regarding the number of potentially affected entities in the industries identified below.

Table 1. 2022 U.S. Census Bureau Data by NAICS Code

Regulated Industry (Footnotes specify potentially affected entities within a regulated industry where applicable)	NAICS Code	SBA Size Standard	Total Firms	Total Small Firms	% Small Firms
Wired Telecommunications Carriers	517111	1,500 employees	3,403	3,027	88.95%
Wireless Telecommunications	517112	1,500 employees	1,184	1,081	91.30%

Regulated Industry (Footnotes specify potentially affected entities within a regulated industry where applicable)	NAICS Code	SBA Size Standard	Total Firms	Total Small Firms	% Small Firms
Carriers (except Satellite)					
Satellite Telecommunications	517410	\$44 million	332	195	58.73%
All Other Telecommunications	517810	\$40 million	1,673	1,007	60.19%

D. Description of Economic Impact and Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities

82. The RFA directs agencies to describe the economic impact of proposed rules on small entities, as well as projected reporting, recordkeeping and other compliance requirements, including an estimate of the classes of small entities which will be subject to the requirements and the type of professional skills necessary for preparation of the report or record.

83. The *FNPRM* proposes a strategy to create operational envelopes that would allow applicants to request broader authority and change operations within that envelope without further permission from the Commission. This new approach is expected to reduce administrative work requirements and delays, making the licensing process more flexible and easier for companies to plan around, which will benefit small entities. Cost savings for small entities will result from removing repetitive paperwork, simplifying forms, reducing the need for special temporary authority (STA) and waiver requests, and also allow for future automation. Further, because the proposed process is less cumbersome and more straightforward, it is likely that small entity applicants will not need to hire lawyers or engineers for routine filings, although more complex cases may still require professional assistance.

84. *Part 100 Commercial Experimental.* In the *FNPRM*, the Commission also proposes to create a

new type of space and earth station license under part 100 for developing or experimental technologies. This part 100 experimental or developmental license would provide companies with a clear and predictable pathway to a short-term license for the purpose of testing new technology or providing proof of concept before moving to commercial operations. We believe that this would increase the Commission's administrative efficiency by bringing all space and earth station licensing under the purview of the Space Bureau instead of sometimes requiring applicants to interface with both the Office of Engineering and Technology (OET) for part 5 applications and the Space Bureau for part 25 applications. This organizational simplification should lead to efficiency benefits for small entities.

85. The Commission also proposes to limit the license term for a part 100 experimental license to two years. We believe this provides licensees with sufficient time to test and validate their technology while remaining short enough to require less intensive review. We also propose to allow up to one renewal for a length of up to two years. Additionally, we propose to require operations under a part 100 experimental license to be conducted on an unprotected and non-interference basis, and not to place applications for a part 100 experimental license on public notice. Further, we propose to require applicants for a part 100 experimental license to certify that operations under the license will not be for commercial purposes but only be for the purpose of testing, experimentation, demonstration, or validation. Lastly, we propose to create a process by which a part 100 experimental license may be converted to a regular part 100 license upon request by the licensee and action by the Commission.

86. *NGSO Call Sign Merging.* In the *FNPRM*, the Commission proposes to allow Non-Geostationary Satellite Orbit (NGSO) satellite system operators to combine authorized satellites currently operating under multiple call signs into one NGSO satellite system under one call sign. We believe that this could help applicants simplify the number of licenses that must be maintained and also provide greater flexibility and modularization, all of which would create efficiencies that would benefit small entities.

87. *Earth Stations.* We seek comment on ways in which we can update and revise the licensing process for earth stations, specifically on establishing a specific definition for "site" as it relates to earth stations and establishing a definition in our rules for User Terminals that matches what we stated in the *Order*. We also seek comment on how we should revise the Earth Station in Motion (ESIM) definitions, technical rules, and limitations to better account for today's reality and whether there are ways in which

we can condense and streamline the number of different types of earth stations that exist in our rules. We seek comment on whether we should align our rules for earth stations with the part 2 rules, whether we should retain our rules relating to receive-only earth stations, and whether we should allow applicants who require a waiver to apply for a Nationwide, Non-Site license.

88. *Modifications.* The Commission seeks comment on whether we should allow space station licensees to change or add radiofrequency (RF) sensing capabilities through a minor modification notification process instead of requiring a major modification application.

89. *Hosted Space Stations.* We seek comment on whether to extend the framework adopted in the *Order* for U.S.-licensed hosted space stations onboard U.S.-licensed host spacecraft to non-U.S.-licensed hosted and host space stations.

90. *Ephemeris Data Sharing and Reporting.* In the *Order*, we take a meaningful step towards enhancing space safety by requiring licensees and market access grantees to share their ephemeris data. We seek comment now on potential future requirements for ephemeris sharing to enhance space safety. We also seek comment on creating a process whereby the Space Bureau could certify qualified, private ephemeris tracking systems as sufficient for the purpose of complying with our rules on ephemeris sharing.

91. *Inter-Satellite Service Links (ISLs) Between U.S.-Licensed and Non-U.S.-Licensed Satellites.* Currently, the Commission does not have rules for the licensing of communications via inter-satellite service links between U.S.-licensed and non-U.S.-licensed space stations or spacecraft. We recognize that these types of operations could pose security risks. We therefore seek comment on the types of issues that the Commission should be concerned with and how to address them. We also seek comment on the most appropriate mechanism for licensing these inter-satellite links.

92. *Frequency Reuse.* Section 100.211(d) of the Commission rules requires all space stations in the Fixed-Satellite Service (FSS) operating in any portion of the 3600-4200 MHz, 5091-5250 MHz, 5850-7025 MHz, 10.7-12.7 GHz, 12.75-13.25 GHz, 13.75-14.5 GHz, 15.43-15.63 GHz, 17.3-17.8 GHz, 18.3-20.2 GHz, 24.75-25.25 GHz, or 27.5-30.0 GHz bands, including feeder links for other space services, and in the Broadcasting-Satellite Service (BSS) in the 17.3-17.8 GHz band (space-to-Earth), shall employ state-of-the-art full frequency reuse, either through the use of orthogonal polarizations within the same

beam and/or the use of spatially independent beams. Given the growth in the use of spectrum by the FSS and BSS, we seek comment on requiring full frequency reuse for all FSS and BSS operations in bands allocated to FSS and BSS as a general rule instead of just the bands listed above.

93. *Orbital Debris Mitigation.* We seek comments on requiring spacecraft monitoring and collision avoidance capabilities for each spacecraft in Low Earth Orbit (LEO) throughout its orbital lifetime, including end-of-mission, until re-entry. Beyond LEO, section 100.111(c)(2) requires NGSO satellites to be 10 cm or larger in the smallest dimension in order to be trackable. In light of the number of spacecraft going beyond LEO and to maintain a safe operating environment, we seek comment on requiring spacecraft going, or intending to go, beyond LEO to be 1 meter or larger in the smallest dimension.

94. *Two-Degree GSO Spacing Requirements.* We seek comment on whether any updates to the current FSS Earth Station Performance Standards are necessary, including whether the current rule covers all current and possible future antenna types, frequency bands, and any other pertinent addition or clarification to bring the rule up to date. We also seek comments on whether updates are needed to the current FSS Transmitting Earth Station Off-Axis Effective Isotropic Radiated Power (EIRP) rule to accommodate current and future sharing of the Geosynchronous Orbit (GSO) arc, whether additional bands need to be included, and any other pertinent addition or clarification necessary to the rule.

95. *Secondary Markets.* In the *Order*, we adopt a framework for processing rounds. This framework will result in clearly defined status across systems, and it appears that processing round status can have a quantifiable impact on operations. Therefore, we seek comment on the possibility of licensees or market access holders exchanging processing round status, via secondary markets.

96. *Renewal and Replacement Expectancies and Reassignment.* In the *Order*, we establish a definition for replacement satellites. In the *FNPRM*, we seek comment on establishing renewal and replacement expectancies and explore the differences between NGSO and GSO satellites that affect renewal and replacement expectancies. We seek additional comment on whether it is possible to establish a unified rule for renewals of space and earth station licenses. There is currently regulatory uncertainty that arises when a GSO space station licensee disposes or relocates an in-orbit satellite and does not immediately surrender the license or place another satellite into the vacated orbital location that uses all the spectrum resources that were licensed for use by the satellite that was disposed or relocated. We

propose a rule that would automatically make the orbital and spectrum resources available for reassignment unless the licensee has already put into place a new replacement satellite at the location, or within a year of the date of the disposal or relocation has relocated another in-orbit satellite to utilize all frequencies that we authorized for use by the disposed or relocated satellite at the orbital location. If neither condition is met, we propose that the Space Bureau will release a public NPRM making the orbital location and any unused frequencies available for reassignment and establishing a date and time that new applications will be accepted.

97. *Miscellaneous.* In addition to the specific proposals in the *FNPRM*, we also seek comment on a number of open questions concerning a variety of topics for which the *FNPRM* contains no specific proposals, including revising the licensing process for earth stations and whether, and how, the Commission should adopt more structured renewal and replacement expectancy frameworks for satellite and earth station authorizations. Small entities are encouraged to bring to the Commission's attention any proposals they may have on the topics on which comments are solicited in the *FNPRM*.

98. *U.S.-Based Control Point.* We seek comment on whether we should require that all satellites, spacecraft, or space stations licensed by the Commission have a U.S.-based control point. We tentatively conclude that we should and seek comment on this tentative conclusion.

99. *Transfers of Control and Assignments.* As we continue to create efficiencies in our approval processes we recognize that any market-based approach must establish clear rules regarding transfers of control and assignments of licenses. Therefore, we seek comment on ways to make this process more efficient while still ensuring proper oversight of licensees.

E. Discussion of Significant Alternatives Considered That Minimize the Significant Economic Impact on Small Entities

100. The RFA directs agencies to provide a description of any significant alternatives to the proposed rules that would accomplish the stated objectives of applicable statutes, and minimize any significant economic impact on small entities. The discussion is required to include alternatives such as: “(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities; (3) the use of performance rather than

design standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities.”

101. If adopted, the new framework proposed in the *FNPRM* could lessen the economic and administrative burdens of the licensing process and the operational requirements for space and earth station operators. Specifically, the *FNPRM* proposes to create “operational envelopes” that would allow applicants to request broader authority and change operations within that envelope without further permission from the Commission. This proposal is intended to significantly reduce repetitive paperwork, decrease the need for STA and waiver requests, and allow for future automation. In addition, this proposal is designed to continue the Commission’s efforts to simplify the overall application process for small and other space and earth station operator entities. The *FNPRM* seeks comment on each proposed rule, as well as on the operational envelope framework in general, as to whether the Commission’s proposed revisions would provide the intended increased speed, predictability, and clarity for applicants. The proposed revisions, if adopted, would ultimately provide benefits for space and earth station operators, of all sizes, in the long term.

102. Small entities also stand to realize economic benefits from efficiencies arising from other licensing simplification and liberalization proposals in the *FNPRM*. These include allowing NGSO call sign merging, allowing space station licensees to change or add RF sensing capabilities through a minor modification notification process, extending the framework for U.S.-licensed hosted space stations to non-U.S.-licensed space stations, creating a process for certification of ephemeris tracking systems, creating a framework for licensing communications via inter-satellite service links between U.S.-licensed and non-U.S.-licensed space stations, permitting licensees or market access holders to exchange processing round status via secondary markets, reforming the process for transfers of control and assignments of licenses, allowing for use of the Nationwide, Non-Site license process if certain waivers are present, and proposing revisions to streamline many earth station definitions. In addition, our proposed rule on GSO orbital slot reassignment may benefit small, newer businesses that will be able to apply for and use orbital resources that another operator has abandoned.

103. The *FNPRM* also contains several proposals to modernize the regulatory environment in ways that stand to benefit the entire space industry, including small entities, by ensuring safety and stability of

all operations licensed by the Commission. These include proposals to require full frequency reuse for all FSS and BSS operations in bands allocated to FSS and BSS, to mitigate orbital debris, to update two-degree GSO spacing requirements, and to require that all satellites, spacecraft, or space stations licensed by the Commission have a U.S.-based control point.

104. In determining its proposals in the *FNPRM*, the Commission considered alternative proposals that could minimize significant economic impact on small entities. For example, our proposed rules tentatively conclude that satellites, spacecraft, or space stations licensed by the Commission have a US based control point. Alternatively, we considered potential burdens of this proposal's requirements on operators and whether those burdens could be relieved by third-party control points that have agreements with operators. In addition, as discussed above, we propose the creation of a framework for licensing communications via inter-satellite service links between U.S.-licensed and non-U.S.-licensed space stations. We considered alternative proposals such as requiring a modification application that outlines the ownership and operations of the non-U.S.-licensed system or whether the U.S.-licensed system should simply file a notification prior to beginning operations that identifies the foreign satellite system. Small entities are encouraged to bring to the Commission's attention any specific concerns that they may have with the proposals outlined in the *FNPRM*.

105. In addition, small entities are encouraged to bring to the Commission's attention any alternative proposals they may have on the topics for which the *FNPRM* contains no specific proposals so that the Commission may benefit from their insight into the impact on small entities as this proceeding progresses. These include such areas as revising the licensing process for earth stations and whether, and how, the Commission should adopt more structured renewal and replacement expectancy frameworks for satellite and earth station authorizations. The Commission expects to consider more fully the economic impact on small entities following its review of comments filed in response to the *FNPRM*, including costs and benefits information. Alternative proposals and approaches from commenters could also help the Commission further minimize the economic impact on small entities.

106. The Commission's evaluation of the comments filed in this proceeding will shape the final conclusions it reaches, the final alternatives it considers, and the actions it ultimately takes in this proceeding to minimize any significant economic impact that may occur on small entities from the final

rules that are ultimately adopted.

F. Federal Rules that May Duplicate, Overlap, or Conflict with the Proposed Rules

107. None.

V. ORDERING CLAUSES

108. IT IS ORDERED, pursuant to sections 4(i), 4(j), 7(a), 301, 303, 307, 308, 309, 310, 312, 316, 332 of the Communications Act of 1934, as amended, 47 U.S.C. 154(i), 154(j), 157(a), 301, 303, 307, 308, 309, 310, 312, 316, 332, that the *FNPRM* IS ADOPTED.

109. IT IS FURTHER ORDERED that the Office of the Secretary, SHALL SEND a copy of the *FNPRM*, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration, in accordance with section 603(a) of the Regulatory Flexibility Act.

Federal Communications Commission.

Marlene Dortch,

Secretary, Office of the Secretary.

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