

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of
Further Streamlining Part 25 Rules Governing
Satellite Services
IB Docket No. 18-314

NOTICE OF PROPOSED RULEMAKING

Adopted: November 15, 2018

Released: November 15, 2018

By the Commission: Chairman Pai and Commissioner O’Rielly issuing separate statements.

Comment Date: (45 days after date of publication in the Federal Register).

Reply Comment Date: (75 days after date of publication in the Federal Register).

I. INTRODUCTION

1. Under the Commission’s rules, satellite operators must follow separate application and authorization processes for the satellites and earth stations that make up their networks and have no option for a single, unified network license. In this Notice of Proposed Rulemaking, we propose to create a new, optional, unified license to include both space stations and earth stations operating in a geostationary-satellite orbit, fixed-satellite service (GSO FSS) satellite network. In addition, we propose to repeal or modify unnecessarily burdensome rules in Part 25 governing satellite services, such as annual reporting requirements. These proposals would greatly simplify the Commission’s licensing and regulation of satellite systems.

II. BACKGROUND

2. Section 11 of the Communications Act of 1934, as amended, directs the Commission to review biennially its regulations that apply to the operations or activities of telecommunications service providers.1 In each biennial review, we must determine whether any of these regulations are no longer necessary as the result of meaningful economic competition between providers of telecommunications service. The Commission must then repeal or modify any such regulation that is no longer in the public interest. Beyond this statutory mandate, the Commission has also used the biennial review process to streamline regulations that do not apply to telecommunications service providers.2

3. On November 3, 2016, the Commission released a public notice inviting comment on which rules should be modified or repealed as part of our 2016 biennial review.3 Below, we address suggestions concerning Part 25 received in the comments on this notice, as well as discuss proposals developed by staff during its independent review.4

1 47 U.S.C. § 161.

2 See, e.g., 2006 Biennial Regulatory Review -- Revision of Part 25, Notice of Proposed Rulemaking, 25 FCC Rcd 1551, 1552, para. 3 (2010).

3 Commission Seeks Public Comment in 2016 Biennial Review of Telecommunications Regulations, Public Notice, 31 FCC Rcd 12166 (2016).

4 While the comments on the 2016 Biennial Review Public Notice cited in this NPRM were filed in IB Docket No. 16-131, comments on the NPRM itself should be filed exclusively in the new docket established for this satellite

### III. DISCUSSION

#### A. Comprehensive Authorization for Space Station and Earth Station Operations

4. *Background.* The Commission issues separate licenses for earth stations and space stations in a satellite network based on the different application requirements in Section 25.114, for space stations, and Section 25.115, for earth stations.<sup>5</sup> The goal of these decades-old, dual licensing paths is to provide for interference-free operation of both the ground component and space component of the satellite network. The satellite licensee, however, is often held responsible for the operation of both the space stations and earth stations in its satellite network. Internationally, this is done through coordination of the entire satellite network (earth stations and space stations) by the satellite operator.<sup>6</sup> Domestically, conditions are often imposed in satellite licenses that require the satellite licensee to ensure compliance with earth station power limits as well. These earth station power limits derive from satellite network coordination, the Commission's "two-degree spacing" policies, or other sources. For example, GSO FSS satellite applicants in "two-degree spacing" bands certify that the earth stations in their networks will comply with certain prescribed routine power limits, unless other power levels are successfully coordinated with adjacent satellite operators. At the same time, earth station applicants in the same "two-degree spacing" bands must either demonstrate or certify compliance with these same routine power limits, unless otherwise coordinated by the satellite operator.<sup>7</sup> Similarly, earth station licensees are often required to comply with any other, relevant conditions in the satellite license as well.<sup>8</sup> These overlaps arise with respect to operations coordinated between satellite operators; however, site-specific coordination of earth stations with terrestrial stations are rarely included in space station authorizations and must be conducted at each specific earth station site selected. Observance of restrictions from terrestrial coordination is the responsibility of earth station licensees, who may or may not be owned or controlled by the space station operator.

5. Terrestrial operations, in contrast, may sometimes be performed under a single authorization for both base stations and user terminals.<sup>9</sup> In its comments, EchoStar Satellite Operating Corporation and Hughes Network Systems, LLC (together, EchoStar) urge the Commission to adopt a similar, comprehensive authorization for satellite services.<sup>10</sup> EchoStar argues that such a comprehensive authorization would offer satellite-service providers additional flexibility to configure their networks of satellites, gateway earth stations, and user terminals.

(Continued from previous page)

streamlining proceeding, IB Docket No. 18-314. Beyond the proposals in this NPRM, the Commission may address matters raised in a petition for reconsideration of a separate rulemaking when it acts upon that pending petition. See Letter from Karis Hastings, Counsel for SES Americom, Inc. and New Skies Satellites B.V., to Marlene H. Dortch, Secretary, FCC, IB Docket No. 18-314 (Nov. 7, 2018).

<sup>5</sup> See 47 CFR §§ 25.114 (general requirements for satellite applications), 25.115 (general requirements for earth station applications). A single authorization for both space station and earth station operators does occur when an earth station operator seeks U.S. market access for a non-U.S.-licensed space station through an earth station license. 47 CFR § 25.137. This decades-old process, however, does not involve the simplified and streamlined approval process envisioned by our proposal below.

<sup>6</sup> See, e.g., International Telecommunication Union (ITU) Radio Regulations, No. 9.7 (requiring coordination of GSO satellite networks with other GSO satellite networks in non-planned bands), <https://www.itu.int/pub/R-REG-RR-2016>.

<sup>7</sup> See generally, e.g., 47 CFR § 25.220 (allowing earth station operations above standard power limits if coordinated with affected satellite operators).

<sup>8</sup> 47 CFR § 25.115(k)(1) (requiring earth station operators communicating with satellites on the Permitted Space Station List to comply with any limitations placed on the satellite authorizations).

<sup>9</sup> See, e.g., 47 CFR § 25.149 (setting forth application requirements for "ancillary terrestrial component" authorizations in certain frequency bands, covering both base stations and mobile terminals).

<sup>10</sup> EchoStar Comments at 5-6.

6. *Proposal.* We propose to adopt an optional licensing structure of a single network license for GSO FSS space stations and earth stations. In addition to providing greater flexibility, this could dramatically simplify how we authorize earth stations. Today, earth station applicants are required to submit information that duplicates, and indeed is more burdensome than, the technical information provided by satellite operators in space station applications.<sup>11</sup> Under a single network license, these separate earth station requirements would be unnecessary.

7. A single satellite network license could also expedite the deployment of new earth stations, and therefore services to the public. In general, we anticipate that the satellite operator – particularly an operator with different ownership than the earth stations with which it communicates – would use contractual agreements with earth station end users to ensure it has the technical and administrative means to guarantee compliance with its network parameters and authorization, much as it does today. Because a separate earth station license would not be required, in cases where terrestrial coordination is unnecessary, a new end user may be able to begin providing service as soon as it had contracted with the satellite operator, without seeking additional Commission approval. Similarly, an earth station could begin operating under the network license of another satellite as soon as an agreement was reached with the new satellite operator, subject to any required coordination. Thus, if successfully implemented, satellite network licenses could eliminate the need for many, if not most, earth station applications, which make up the bulk of applications received in the satellite services today.

8. We expect that a comprehensive satellite network license would generally follow the application requirements for space stations and would be held by the space station operator. It would contain all authority necessary to operate space stations and blanket-licensed earth stations, and conditional authority to operate earth stations requiring individual coordination, subject to successful completion of the coordination. Other earth station requirements, such as build-out conditions, would be incorporated into the single license.

9. We propose initially to limit this unified license to GSO FSS space stations and earth stations in bands in which the Commission has adopted standard power limits under our two-degree spacing policy, excluding frequencies under 10 GHz at this time.<sup>12</sup> In these bands, the Commission has adopted standard power limits on both uplink and downlink transmissions and has a well-defined sharing environment and licensing regime. We invite comment, however, on expanding such a licensing structure to other bands and services, in particular bands subject to Section 25.136 in which the Commission has already adopted detailed sharing rules between the FSS and other services. We also request comment on the integration of earth station and space station requirements into a single license, including whether certain services, frequency bands, or types of operation would prove easier or more difficult to authorize under a single satellite network license than others. Specifically, we seek comment on the costs and benefits associated with different scopes for a unified license option. And while we are proposing a unified licensing structure, whereby one license would cover both space and earth stations, we invite comment on whether a similar approval process could be implemented for market access requests that include authority for multiple earth stations.

10. Specifically, we propose that under a unified license, the GSO FSS applicant would ~~submit the space station application~~ submit the space station application information required by Sections 25.114 and 25.140. If the operator

<sup>11</sup> For example, a GSO FSS earth station applicant wishing to be licensed under standard power limits must provide a technical demonstration of compliance with these limits. 47 CFR § 25.115(g)(1). A satellite applicant, however, need only certify compliance with the same limits. 47 CFR § 25.140(a)(3)(i), (ii), (iii). If higher power levels are subsequently coordinated, the earth station operator must modify its license before operating at the higher coordinated levels. 47 CFR § 25.220(d). The satellite operator may operate at the higher levels as soon as the coordination agreement is reached. 47 CFR § 25.140(a)(3)(i), (ii), (iii) (requiring a space station applicant to certify it will comply with standard power limits “unless the non-routine uplink and/or downlink operation is coordinated with operators of authorized co-frequency space stations at assigned locations within six degrees”).

<sup>12</sup> These bands are as follows: 10.95-11.2 GHz, 11.45-12.2 GHz, 13.75-14.5 GHz, 18.3-18.8 GHz, 19.7-20.2 GHz, 28.35-28.6 GHz, and 29.25-30 GHz.

certified compliance with standard uplink power levels in Section 25.140, it would not need to provide any additional information on earth station performance or verified performance currently required by Sections 25.115(a) or 25.132. The applicant would need to certify under Section 25.115(i) that the use of any contention protocol will be reasonable. Site coordination and other issues specific to the particular locations of earth stations would be completed and notified separately by the earth station end user, as described below.

11. A space station operator and licensee under a joint space station and earth station license would need to maintain sufficient control over all the operations under the license required of a Commission licensee pursuant to Commission precedent.<sup>13</sup> As noted, we anticipate that this control could be exercised through contractual means where necessary, but we invite comment on the issues of control residing with the space station operator, and on what kinds of contractual provisions would be appropriate to address such issues. Similarly, we seek comment on whether any changes to our control provisions in Section 25.271 would be necessary to accommodate our unified license proposal. We also seek comment on whether, as an alternative or addition to the unified license proposal herein, we should maintain separate licenses for earth stations communicating with GSO FSS space stations, but permit such earth station applicants to certify that they will comply with the terms and conditions of the space station network with which the earth station will communicate as a substitute for filing the technical information about the proposed earth station operations currently required to be submitted by earth station applicants under Schedule B to the earth station application. We seek comment on the costs and benefits to both the Commission and applicants from this alternative proposal.

12. We also seek comment on creating a new application fee category in Section 1.1107 for unified space station/earth station licenses based on the fees for geostationary space station applications, and comment on the appropriate values for the various types of applications.<sup>14</sup> The benefit of a new fee category would be to appropriately reflect the dual earth station and space station elements of the unified license. This new application fee category could include initial license applications, license modifications, license transfers, and requests for special temporary authority. Alternatively, we seek comment on applying the current space station application fees to unified license applications as well. In this regard, we expect that the majority of Commission staff review of a unified license application would concern the information currently provided in space station applications.

13. Some earth stations operate in bands shared with other users, such as terrestrial operators, and require site-based coordination to ensure successful operation. These earth station coordination agreements are currently submitted in individual, searchable earth station files. To maintain transparency and ease of access to site-specific earth station coordination information, we propose to require earth station end users to separately file this information with the Commission, as today is done in the context of a license application, rather than to have all earth station coordination agreements submitted in the single network license file. These filings would be made under a normal earth station call sign and file number in the International Bureau Filing System for ease of searchability; however, they would not constitute an application for authorization. Rather, these filings would demonstrate that the earth station has been successfully coordinated, and therefore can fulfill the coordination requirements in a unified, network license under which it wishes to operate. We anticipate that Commission staff would review the

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<sup>13</sup> See, e.g., *Intermountain Microwave*, 24 Rad. Reg. (P&F) 983, 12 F.C.C.2d 559 (1963); see also *Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets*, Second Report and Order, 19 FCC Rcd. 17503, 17536, para. 66 (2004) (excluding satellite services from the revised spectrum leasing policies adopted for terrestrial wireless services, including a new control standard differing from *Intermountain Microwave*).

<sup>14</sup> The Repack Airwaves Yielding Better Access for Users of Modern Services Act of 2018, or the RAY BAUM'S Act of 2018, amended sections 8 and 9 and added section 9A to the Communications Act. Consolidated Appropriations Act, 2018, Pub. L. No. 115-141, 132 Stat. 1084, Division P – RAY BAUM'S Act of 2018, Title I, § 103 (2018). These provisions became effective October 1, 2018. See *id.*

coordination filings for completeness and accuracy, and after a positive determination place the filings on public notice for comment under Section 25.151. After the comment period, the Commission would indicate its approval of the filings in the International Bureau Filing System before the earth station operations could commence under any unified network license, subject to the terms and restrictions of both the license and coordination agreements. This process for reviewing coordination filings is necessarily site-specific and would be conducted in substantially the same way as it is today in a license application; however, other elements of the earth station application that are today required and reviewed by Commission staff before public notice would not be necessary, lowering the overall burden on both earth station operators and Commission staff. We invite comment on this procedure and ways to simplify and streamline the submission and any review of these filings. More broadly, we seek comment on the costs of implementing unified space station and earth station license for both operators and the Commission, including administrative costs, and on the benefits of such a license for both the Commission and licensees.

14. To maintain the validity of its coordination filings, an earth station end user would be required to fulfill the buildout requirements for the type of earth station. This period is usually one year.<sup>15</sup> In bands shared with other services, an earth station buildout requirement can prevent warehousing of spectrum to prevent deployment in other services. Other showings specific to the particular earth station location or configuration, such as antenna height restrictions under Part 17<sup>16</sup> or radiation hazard limits under Part 1, section I, could be submitted in an individual earth station file as well. Where only certifications are required, and are today made by the licensee under a blanket earth station license, we propose the satellite operator and joint licensee be made responsible for such certifications and for ensuring, through contractual or other means, that these requirements are met by earth stations communicating with its space station.

#### **B. Build-Out Requirements for Certain Individually Licensed Earth Stations**

15. The Spectrum Frontiers proceeding identified certain frequency bands for flexible wireless use, while at the same time allowing for the deployment of a limited number of earth stations that, under certain conditions, would be either entitled to protection from terrestrial stations (receive earth stations) or not required to protect terrestrial stations (transmit earth stations).<sup>17</sup> These individually licensed earth stations are expected to be used as gateway stations and not to serve individual consumers. Current satellite design contemplates the use of very narrow beams pointed to the locations where these gateway earth stations will be located. Therefore, certainty about these gateway locations is required early in the satellite design process.<sup>18</sup>

16. Given that, there is a disconnect between the one-year earth station buildout requirement and the time allowed for a satellite to be launched and brought into operation (for instance, a geostationary satellite has to be operational five years from the grant of the authorization).<sup>19</sup> Having a gateway earth station built within one year could mean that a significant investment would remain unused for as long as four years. Moreover, without a satellite to communicate with, this gateway earth station would not even

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<sup>15</sup> See 47 CFR § 25.133(a).

<sup>16</sup> See 47 CFR § 25.286.

<sup>17</sup> See 47 CFR § 25.136 (including the frequency bands 27.5-28.35 GHz, 37.5-40 GHz, and 47.2-48.2 GHz).

<sup>18</sup> See Letter from Jodi Goldberg, Associate Corporate Counsel, Hughes Network Systems, LLC, to Marlene H. Dortch, Secretary, FCC (Apr. 27, 2017). If gateway locations are not known with certainty, the satellite would have to be equipped with steerable beams that could point anywhere within a certain area. This implies a significant increase in cost and complexity for geostationary satellites that would not bring any benefit as, after the location of the corresponding gateway location is determined, this gateway beam would be pointing to a fixed location.

<sup>19</sup> Compare 47 CFR § 25.133(a) with 47 CFR § 25.164(a).

be able to meet the buildout rule.<sup>20</sup> Therefore, we propose to better align the buildout requirements for space stations and associated gateway earth stations to ensure certainty and allow a more efficient satellite design. We propose that earth stations authorized through Section 25.136 have a buildout requirement defined by the date the associated satellite becomes operational, up to five years for a GSO satellite or six years for an NGSO satellite if the satellite is put into operation at the end of its milestone period, but in any event no less than the one year period currently applicable. This means that, if the associated satellite is already in orbit or is launched within one year of the date of the earth station application, the one-year buildout requirement remains applicable to this earth station. We seek comment on this proposal.

### C. Annual Reporting Requirements for Satellite Operators

17. Section 25.170 requires satellite operators to annually disclose any authorized satellites or spectrum unavailable for service, a contact point to resolve interference, and the construction progress of any authorized replacement satellites. EchoStar urges the Commission to repeal these annual reporting requirements as unnecessary burdens on satellite operators.<sup>21</sup> While these requirements were recently consolidated and harmonized, our experience has been that staff do not make regular use of most of these reports.<sup>22</sup> We further believe that the requested information often may be duplicative or unnecessary.<sup>23</sup> We therefore propose to remove the annual reporting requirement for satellite operators, except to retain the requirement that satellite operators confirm yearly their point of contact information, which is necessary to resolve any interference disputes, and for continuing operations purposes. We propose, however, to move this requirement to an adjacent rule, Section 25.171, covering satellite points of contact.<sup>24</sup> We seek comment on this proposal.

### D. Out-of-Band Emissions

18. The out-of-band emissions rule in Section 25.202(f) was adopted in 1973 to limit unwanted emissions that may cause harmful interference to operators in adjacent bands.<sup>25</sup> The limits, however, are outdated and have led to confusion among some operators. For example, some have apparently interpreted the attenuation schedule prescribed in Section 25.202(f) to take as a reference the in-band power spectral density of the emission, which would make a significant portion of the assigned frequency band unusable because it would require an abrupt 25 dB attenuation at band edge. We expect that updating this rule to conform to internationally harmonized standards would eliminate most such misinterpretations – misinterpretations which could otherwise encourage inefficient satellite designs or deter the construction and launch of some satellites altogether.

19. In place of this decades-old provision, therefore, we propose to adopt a clear, up to date international standard, Recommendation ITU-R SM.1541-6, “Unwanted emissions in the out-of-band domain,” which was developed with U.S. input. Rather than requiring an abrupt attenuation at band edge,

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<sup>20</sup> 47 CFR § 25.133(b)(1).

<sup>21</sup> EchoStar Comments at 4.

<sup>22</sup> *Comprehensive Review of Licensing and Operating Rules for Satellite Services*, Report and Order, 28 FCC Rcd 12403, 12412-13, paras. 18-23 (2013).

<sup>23</sup> 47 CFR § 25.170. Part 4 also contains disclosure requirements related to service outages. 47 CFR § 4.9. Section 25.171 separately requires satellite licensees to maintain updated contact information. 47 CFR § 25.171. The Commission recently eliminated the requirements to demonstrate construction progress of non-replacement satellites. *Comprehensive Review of Licensing and Operating Rules for Satellite Services*, Second Report and Order, 30 FCC Rcd 14713, 14738, para. 59 (2015).

<sup>24</sup> These measures do not impact the separate space station data collection required by the Commission in the Mid-Band Order for purposes of evaluating the potential for flexible use and reallocation of spectrum in the 3.7-4.2 GHz band. *Mid Band Order*, FCC 18-91, paras. 23-24.

<sup>25</sup> 47 CFR § 25.202(f); *Amendment of Parts 21 and 25 of the Rules to Establish Revised Earth Station Coordination and Interference Calculation Methods for International and Domestic Communication-Satellite Facilities by Nongovernmental Entities*, Report and Order, 40 F.C.C.2d 395 (1973), published at 38 FR 8569.

this out-of-band mask provides for a smooth transition starting at band edge. We seek comment on this proposal. We believe this ITU Recommendation is reasonably available to interested parties because it is available free of charge on the ITU website, <https://www.itu.int/rec/R-REC-SM.1541-6-201508-I/en>, and would also be made available for inspection at Commission headquarters.

#### E. Dismissal of Applications

20. The Commission requires all applications under Part 25 to be substantially complete when filed. An application that is not substantially complete will be returned to the applicant under the rules without the ability to correct the substantial defects and maintain its original filing.<sup>26</sup> EchoStar notes that space station applications are complex, and that under this policy errors in an application could cause it to be returned and lose its place in the first-come, first-served queue.<sup>27</sup> EchoStar therefore suggests that we allow applicants to correct any errors or omissions within 60 days of a Commission request. EchoStar also proposes that applications be accepted for filing automatically within 30 days of filing, unless the Commission determines otherwise.

21. We invite comment on these suggestions, including any effect on our policy for “major” amendments under Section 25.116 that are considered as newly filed applications under the Commission’s space station queue or processing round regimes. We also ask how proposals for cure periods can be crafted to prevent the filing of placeholder applications designed to reserve the position of a woefully incomplete application in the first-come, first-served queue. Should we specify minimum criteria for acceptance for filing? If so, what should they be?

#### F. Notification of Minor Earth Station Modifications

22. When an earth station operator makes certain minor modifications to its licensed earth station that do not increase the risk of interference, such as changes that do not increase power, add frequencies, or repoint the antenna beyond any coordinated range, the Commission requires only a notification of such changes within 30 days of the modification. In an *ex parte* filing, Iridium argues that such modifications within the scope of the authorization and described in Section 25.118(a)(4) should not even require a notification to the Commission because they do not impact other service providers.<sup>28</sup> Similarly, Iridium asks that the Commission clarify that the addition of new transceiver and antenna combinations to an existing blanket earth station license do not require prior Commission notification when they meet the requirements currently listed in Section 25.118(a)(4).

23. We believe Iridium’s proposed changes would streamline minor earth station changes that do not pose a risk of additional interference to other users, and therefore propose to implement them.<sup>29</sup> However, we invite comment on whether such rule changes would have any impact on the reliability of information filed with the Commission in earth station applications.

### IV. PROCEDURAL MATTERS

24. *Ex Parte Presentations.* The proceeding this Notice initiates shall be treated as a “permit-but-disclose” proceeding in accordance with the Commission’s *ex parte* rules.<sup>30</sup> Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any

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<sup>26</sup> See 47 CFR § 25.112(a).

<sup>27</sup> EchoStar Comments at 6.

<sup>28</sup> Letter from Patrick R. Halley, Counsel to Iridium Communications Inc., to Marlene H. Dortch, Secretary, FCC (Sept. 17, 2018).

<sup>29</sup> We note that if the Commission adopts the earth station certification proposal above, these requirements may be superfluous in any event for those operators simply certifying that they will comply with the Commission’s earth station rules, as some specifics of operation now given in the initial application will no longer be required and therefore not need to be notified when changed.

<sup>30</sup> 47 CFR § 1.1200 *et seq.*

oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter's written comments, memoranda or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with Section 1.1206(b). In proceedings governed by Section 1.49(f) or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (e.g., .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission's *ex parte* rules.

25. *Filing Comments.* Pursuant to Sections 1.415 and 1.419,<sup>31</sup> interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS).

- *Electronic Filers.* Comments may be filed electronically using the Internet by accessing the ECFS, <http://apps.fcc.gov/ecfs>.
- *Paper Filers.* Parties who file by paper must include an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.  
Filings may be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.
  - All hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to FCC Headquarters at 445 12<sup>th</sup> Street, SW, Room TW-A325, Washington, DC 20554. The filing hours are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes must be disposed of before entering the building.
  - Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9050 Junction Drive, Annapolis Junction, MD 20701.
  - U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12<sup>th</sup> Street, SW, Washington DC 20554.
- *Persons with Disabilities.* To request materials in accessible formats for persons with disabilities (braille, large print, electronic files, audio format), or to request reasonable accommodations for filing comments (accessible format documents, sign language interpreters, CART, etc.), send an email to [fcc504@fcc.gov](mailto:fcc504@fcc.gov) or call 202-418-0530 (voice) or 202-418-0432 (TTY).

26. *Initial Regulatory Flexibility Analysis.* As required by the Regulatory Flexibility Act,<sup>32</sup> the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on a substantial number of small entities of the proposals addressed in this Notice. The

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<sup>31</sup> 47 CFR §§ 1.415, 1.419.

<sup>32</sup> See 5 U.S.C. § 603.



IRFA is set forth in Appendix A. Written public comments are requested on the IRFA. These comments must be filed in accordance with the same filing deadlines for comments on the Notice, and they should have a separate and distinct heading designating them as responses to the IRFA. The Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, will send a copy of this Notice, including the IRFA, to the Chief Counsel for Advocacy of the Small Business Administration, in accordance with the Regulatory Flexibility Act.<sup>33</sup>

27. *Paperwork Reduction Act.* This document contains proposed new and modified information collection requirements. The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public and the Office of Management and Budget (OMB) to comment on the information collection requirements contained in this document, as required by the Paperwork Reduction Act of 1995, Public Law 104-13. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, *see* 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.

#### V. ORDERING CLAUSES

28. Accordingly IT IS ORDERED, pursuant to Sections 4(i), 11, 303, and 316 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 161, 303, 316, that this Notice of Proposed Rulemaking IS ADOPTED.

29. IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center will send a copy of this Notice of Proposed Rulemaking, 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, 5 U.S.C. § 601 *et seq.*

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch  
Secretary

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<sup>33</sup> *See* 5 U.S.C. § 603(a).

**APPENDIX A**  
**Proposed Rules**

The Federal Communications Commission proposes to amend title 47 of the Code of Federal Regulations, part 25, as follows:

PART 25 – SATELLITE COMMUNICATIONS

1. The authority citation for part 25 continues to read as follows:

Authority: 47 U.S.C. 154, 301, 302, 303, 307, 309, 310, 319, 332, 605, and 721, unless otherwise noted.

2. In §25.108, add new paragraph (c)(10) to read as follows:

§25.108 Incorporation by reference.

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(c) \*\*\*

(10) Recommendation ITU-R SM.1541-6, “Unwanted emissions in the out-of-band domain,” August 2015, <https://www.itu.int/rec/R-REC-SM.1541-6-201508-I/en>, Copyright 2015. Incorporation by reference approved for §25.202(f).

3. In §25.118, remove paragraph (a)(4) and revise paragraph (b) to read as follows:

§25.118 Modifications not requiring prior authorization.

\* \* \* \* \*

(b) *Earth station modifications, notification not required.* Notwithstanding paragraph (a) of this section:

(1) Equipment in an authorized earth station may be replaced without prior authorization and without notifying the Commission if the new equipment is electrically identical to the existing equipment.

(2) Licensees may make other changes to their authorized earth stations, including the addition of new transceiver/antenna combinations, without notifying the Commission, provided the modification does not involve:

(i) An increase in EIRP or EIRP density (either main lobe or off-axis);

(ii) Additional operating frequencies;

(iii) A change in polarization;

(iv) An increase in antenna height;

(v) Antenna repointing beyond any coordinated range; or

(vi) A change from the originally authorized coordinates of more than 1 second in latitude or longitude for stations operating in frequency bands shared with terrestrial systems or more than 10 seconds of latitude or longitude for stations operating in frequency bands not shared with terrestrial systems.

\* \* \* \* \*

4. Add §25.123 to read as follows:

§25.123 Combined space station and earth station authorization

A single license may be issued that authorizes the operations of a GSO FSS space station and earth stations in a satellite network in the following bands:

- 10.95-11.2 GHz (space-to-Earth)
- 11.45-12.2 GHz (space-to-Earth)
- 13.75-14.5 GHz (Earth-to-space)
- 18.3-18.8 GHz (space-to-Earth)
- 19.7-20.2 GHz (space-to-Earth)
- 28.35-28.6 GHz (Earth-to-space)
- 29.25-30 GHz (Earth-to-space)

(a) An application for such a comprehensive network license must contain the information required by §§ 25.114 and 25.140 and must certify that earth stations accessing the network will comply with part 1, subpart I and part 17 of this chapter:

(b) An earth station seeking to operate in a band shared on an equal basis with terrestrial services and under a combined space station and earth station authorization must submit, in a separate earth station file in IBFS and under an earth station call sign, any coordination or other information required by §25.203.

(c) An earth station operating under a combined space station and earth station authorization is not required to submit the antenna performance information specified in §25.132.

5. In §25.133, revise the second sentence of paragraph (a)(1) and add a new paragraph (a)(3) to read as follows:

§25.133 Period of construction; certification of commencement of operation.

(a)(1) \* \* \* Construction of the earth station must be completed and the station must be brought into operation within 12 months from the date of the license grant except as may be determined by the Commission for any particular application and except as provided in paragraph (a)(3) of this section.

\* \* \* \* \*

(3) An earth station licensed under §25.136 may have a buildout period associated with the buildout period of a communicating space station listed in the earth station application. The earth station must be brought into operation by the date the space station is brought into operation, as certified under §25.173(b), or one year after the date of grant of the earth station license, whichever is longer.

\* \* \* \* \*

6. Amend §25.151(a) by revising paragraphs (10), (11), and (12) and adding paragraph (13) to read as follows:

§25.151 Public Notice

(a) \* \* \*

\* \* \* \* \*

(10) The receipt of space station application information filed pursuant to §25.110(b)(3)(iii);

(11) The receipt of notifications of non-routine transmission filed pursuant to §25.140(d);

- (12) The receipt of EPFD input data files from an NGSO FSS licensee or market access recipient, submitted pursuant to §25.111(b) or §25.146(c)(2); and
- (13) The receipt of complete information under §25.123.

§25.170 [Removed]

7. Remove §25.170.

8. Revise §25.171 to read as follows:

§25.171 Contact information reporting requirements.

If contact information filed in space station application or pursuant to §25.170(b) or §25.172(a)(1) changes, the operator must file corrected information electronically in the Commission's International Bureau Filing System (IBFS), in the "Other Filings" tab of the station's current authorization file. The operator must file the updated information within 10 days. In addition, satellite operators must confirm the contact information on June 30 of each year.

9. Revise §25.202(f) to read as follows:

§25.202 Frequencies, frequency tolerance, and emission limits.

\*\*\*\*\*

(f) *Unwanted emissions in the out-of-band domain.* The mean power of an emission must be attenuated below the mean output power of the transmitter in accordance with Recommendation ITU-R SM.1541-6, "Unwanted emissions in the out-of-band domain" (incorporated by reference, §25.108), except as provided for SDARS terrestrial repeaters and NGSO inter-satellite emissions in paragraphs (h) and (i) of this section.

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**APPENDIX B****Initial Regulatory Flexibility Analysis**

As required by the Regulatory Flexibility Act (RFA),<sup>34</sup> the Commission has prepared this Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on a substantial number of small entities by the policies and rules proposed in this Notice. We request written public comments on this IRFA. Commenters must identify their comments as responses to the IRFA and must file the comments by the deadlines for comments on the Notice provided above in Section V.B. The Commission will send a copy of the Notice, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration.<sup>35</sup> In addition, the Notice and IRFA (or summaries thereof) will be published in the Federal Register.<sup>36</sup>

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

The Notice of Proposed Rulemaking seeks comment on creating a new, streamlined license for both space stations and earth stations and other streamlining measures for the authorization of earth stations. It also proposes to remove the annual reporting requirements for satellite operators, updating the out-of-band emission limits for satellite operators, and other corrections in 47 CFR Part 25.

**B. Legal Basis**

The proposed action is authorized under Sections 4(i), 11, 303, and 316 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 161, 303, 316.

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

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.<sup>37</sup> The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."<sup>38</sup> In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.<sup>39</sup> 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 Small Business Administration (SBA).<sup>40</sup>

**Satellite Telecommunications.** This category comprises firms "primarily engaged in providing telecommunications services to other establishments in the telecommunications and broadcasting industries by forwarding and receiving communications signals via a system of satellites or reselling

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<sup>34</sup> See 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. § 601 *et seq.*, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

<sup>35</sup> See 5 U.S.C. § 603(a).

<sup>36</sup> *Id.*

<sup>37</sup> 5 U.S.C. § 603(b)(3)

<sup>38</sup> 5 U.S.C. § 601(6).

<sup>39</sup> 5 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in 15 U.S.C. § 632). Pursuant to the RFA, the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register." 5 U.S.C. § 601(3).

<sup>40</sup> Small Business Act, 15 U.S.C. § 632 (1996).

satellite telecommunications.”<sup>41</sup> The category has a small business size standard of \$32.5 million or less in average annual receipts, under SBA rules.<sup>42</sup> For this category, Census Bureau data for 2012 show that there were a total of 333 firms that operated for the entire year.<sup>43</sup> Of this total, 299 firms had annual receipts of less than \$25 million.<sup>44</sup> Consequently, we estimate that the majority of satellite telecommunications providers are small entities.

#### **D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities**

The NPRM proposes to remove the reporting requirements for satellite operators and on creating a new, streamlined network license for both satellites and earth stations, in addition to other streamlining measures for the licensing of earth stations. These would reduce paperwork costs for such satellite and earth station operators.

#### **E. Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered**

The RFA requires an agency to describe any significant, specifically small business, alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): “(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 rules 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.”<sup>45</sup>

The NPRM seeks comment on particular measures to streamline the licensing of earth stations, which would reduce economic impacts on small entities. It does not envision increasing the economic impacts on small entities. Specifically, the NPRM requests comment on eliminating the need for earth station operators, including small entities, to notify the Commission of certain minor modifications to their earth stations. The NPRM also seeks comment on relaxing the acceptability for filing standard for part 25 applications, including earth station applications. And it invites comment on a clearer, modern standard for out of band emissions, including those from earth stations. Other streamlining measures are also proposed, and comment is sought on ways to further reduce burdens in implementing the proposals in the NPRM.

#### **F. Federal Rules that May Duplicate, Overlap, or Conflict With the Proposed Rules**

None.

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<sup>41</sup> U.S. Census Bureau, 2012 NAICS Definitions, “517410 Satellite Telecommunications”; <http://www.census.gov/naics/2007/def/ND517410.HTM>.

<sup>42</sup> 13 C.F.R. § 121.201, NAICS code 517410.

<sup>43</sup> U.S. Census Bureau, *2012 Economic Census of the United States*, Table EC1251SSSZ4, Information: Subject Series - Estab and Firm Size: Receipts Size of Firms for the United States: 2012, NAICS code 517410 [http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN\\_2012\\_US\\_51SSSZ4&prodType=table](http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_51SSSZ4&prodType=table).

<sup>44</sup> *Id.*

<sup>45</sup> 5 U.S.C. § 603(c)(1)-(c)(4).

**STATEMENT OF  
CHAIRMAN AJIT PAI**

Re: *Further Streamlining Part 25 Rules Governing Satellite Services*, IB Docket No. 18-314.

In 1958, the U.S. Army Signal Corps pursued a top-secret mission to develop the world's first communications satellite. It was launched into orbit aboard an Atlas rocket from Cape Canaveral on December 18th of that year, and the world learned of the project's success the next day. That's when the satellite broadcast a recorded holiday message from President Eisenhower. "Through the marvels of scientific advance," he explained, "my voice is coming to you from a satellite circling in outer space."<sup>1</sup>

Sixty years after this milestone in the space race, satellites are critically important to delivering communications services to Americans. So today, we take steps to simplify the FCC's satellite licensing process and encourage the launch of new satellite systems. Most importantly, we propose to create an optional single license for space stations and earth stations operating in a geostationary, fixed-satellite service satellite network. This proposal—which is the product of the Commission's 2016 biennial review of its rules—would eliminate redundancies in the two separate licensing processes for satellites and earth stations and ultimately result in faster deployment of services to consumers. We also seek public input on streamlining and making more flexible our satellite rules and on reducing paperwork burdens on satellite operators by repealing unnecessary annual reporting requirements.

Taken together, these changes are intended to ensure that the United States remains the most desirable country in the world for licensing and operating satellites.

Thank you to the Commission's dedicated staff for their diligent work on this item: Jose Albuquerque, Paul Blais, Clay DeCell, Stephen Duall, Jennifer Gilsonan, Karl Kensinger, Kerry Murray, and Troy Tanner from the International Bureau and David Horowitz and Doug Klein from the Office of General Counsel.

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<sup>1</sup> NASA, *This Month in NASA History: The U.S. SCORE'd in the Race to Space*, <https://appel.nasa.gov/2015/12/03/this-month-in-nasa-history-the-u-s-scored-in-the-race-to-space/> (Dec. 3, 2015).

**STATEMENT OF  
COMMISSIONER MICHAEL O'RIELLY**

Re: *Further Streamlining Part 25 Rules Governing Satellite Services*, IB Docket No. 18-314.

I support today's notice seeking to streamline the Commission's satellite rules to reduce unnecessary burdens. By proposing the option of a single network license, which would require one unified application for space and earth stations that are used in the same satellite network, we reduce paperwork and costs not only for satellite operators, but also for the Commission. And, for those earth stations that will operate in bands shared by terrestrial users, such as our spectrum frontiers licenses, operators will be able to file a coordination filing instead of a full-fledged application. Further, we also seek comment on common sense proposals, such as harmonizing the earth station buildout requirement to when a space station becomes operational and eliminating worthless annual reporting requirements. I thank the Chairman for continuing regulatory reform efforts along these lines and for reducing burdens on all industry sectors.