

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

In the Matter of)
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)
Hughes Communications, Inc.) File Nos. 45-48-SAT-P/LA-98
)
) IBFS Nos. SAT-LOA-19971222-00201-
Application for Authority to Construct,) 00207
Launch, and Operate a Ka-Band Satellite)
System in the Fixed-Satellite Service) Call Signs S 2338-2341

ORDER AND AUTHORIZATION

Adopted: August 2, 2001

Released: August 3, 2001

By the Chief, International Bureau:

I. INTRODUCTION

1. By this Order, we authorize Hughes Communications, Inc. ("Hughes) to launch and operate eight additional satellites as a supplement to its authorized Ka-band geostationary-satellite orbit system. In a companion order issued today, we assign Hughes's additional satellites to the 131° W.L, 26.2° W.L., 7.5° W.L. and 103° E.L. orbital locations. This will allow Hughes to expand and improve a variety of advanced broadband communication services to business and consumers around the globe.

II. BACKGROUND

2. Hughes is one of 12 applicants seeking authority to operate geostationary-satellite orbit ("GSO") satellites in the second Ka-band processing round. In May 1997, the International Bureau licensed 13 applicants, including Hughes, to launch and operate GSO satellite systems as part of the first Ka-band processing round ("First Round"). In October 1997, the Bureau established a second processing round ("Second Round"), inviting interested parties to file applications on or before December 22, 1997 for consideration in this round. The Second Round GSO licenses and, in one case, reservation of orbit

1 See In the Matter of Hughes Communications Galaxy, Inc. Application for Authority to Construct, Launch, and Operate a Ka-Band Satellite System in the Fixed-Satellite Service and a Ku-band Broadcast Communications Satellite System, 13 FCC Rcd 1351 (1997) (Hughes First-Round License). For purposes of this order, the terms "Ka-band" or "28 GHz band" refer to the space-to-Earth communications ("downlink") in radio frequencies at 17.7-20.2 GHz and the corresponding Earth-to space communications ("uplink") in frequencies at 27.5-30.0 GHz. We authorize Hughes to operate in a portion of these frequency bands indicated in this order.

2 Second Round Assignment of Geostationary Satellite Orbit Locations to Fixed Satellite Service Space Stations in the Ka-Band, Order, DA 01-1693 (Int'l Bur. rel. August 3, 2001) ("Second Round GSO Assignment Order").

3 The Bureau also licensed one non-geostationary-satellite orbit ("NGSO") Ka-Band System. See Teledesic Corporation, Application for Authority to Construct, Launch and Operate a Low Earth Orbit Satellite System in the Domestic and International Fixed Satellite Service, 12 FCC Rcd 3154 (Int'l Bur. 1997).

locations for a non-U.S.-licensed satellite system, will enable new entrants to offer services competitive with those licensed in the First Round and will allow First Round licensees an opportunity to expand and improve the capabilities and service offerings of their licensed systems.

3. Hughes is an indirect wholly-owned subsidiary of Hughes Electronics Corporation, which is in turn an affiliate of General Motors Corporation. Hughes was licensed to launch and operate twenty satellites at fifteen orbital locations in the First Round.⁴ In this processing round, Hughes's application proposes to provide a wide range of very high data rate circuit-switched services worldwide on a non-common carrier basis, by supplementing its previously licensed Ka-band Spaceway system with an expansion consisting of eight technically identical satellites at four inter-linked orbital positions.⁵ In its application, Hughes proposes two satellites at each of the following orbital positions: 117° W.L., 69° W.L., 26.2° W.L. and 99° E.L.⁶

4. Hughes proposes to use spectrum in the 28.35-28.6 GHz and 29.25-30.0 GHz frequency bands for uplink (Earth-to-space) communications.⁷ Hughes explains that it also intends to use an additional 500 megahertz of bandwidth within the 27.5-28.35 GHz frequency band for international communications uplinks outside the United States.⁸ Hughes proposes to use spectrum in the 17.8-18.8 GHz and 19.7-20.2 GHz frequency bands for downlink (space-to-Earth) communications.⁹ Hughes requests authority to conduct normal on-orbit command and telemetry links in Ka-band frequencies.¹⁰ Hughes also requests authority to conduct its tracking, telemetry and command during transfer orbit operations in the C-band frequencies.¹¹ Hughes informs the Commission that it also intends to operate optical inter-satellite links.¹²

⁴ *Hughes First Round License*, DA 13 FCC Rcd at 1363 ¶ 35. These are the 101° W.L., 99° W.L., 67° W.L., 49° W.L., 25° E.L., 36° E.L., 40° E.L., 48° E.L., 54° E.L., 101° E.L., 111° E.L., 124.5° E.L., 149° E.L., 164° E.L., and 173° E.L. orbital locations. In April 1997, the Commission authorized Hughes to merge with PanAmSat. *Hughes Communications, Inc. and Affiliated Companies*, 12 FCC Rcd 7534 (1997). Hughes subsequently transferred seven Ka-band licenses to PanAmSat.

⁵ Application of Hughes Communications, Inc. for Authority to Launch and Operate Spaceway EXP™, a GSO Expansion of the Spaceway™ Global Broadband Satellite System (filed December 22, 1997) ("Hughes Application") at pp. 1-6.

⁶ Hughes Application at pp. 9, 20. Hughes subsequently revised its request, proposing two satellites at the 123° W.L. orbital position, instead of the 117° W.L. orbital position, and two satellites at the 71° W.L. orbital position, instead of the 69° W.L. orbital position. Letter from Joslyn Read, Assistant Vice President, Regulatory & International Affairs, Hughes Network Systems, to Donald Abelson, Chief, International Bureau, Federal Communications Commission (June 26, 2001).

⁷ Hughes Application at p. 45.

⁸ *Id.*

⁹ *Id.*

¹⁰ Hughes Application at p. 46.

¹¹ Hughes requests authority for TT&C links in 1.5 MHz of spectrum in the 3.65-3.7 GHz and 6.425-6.525 GHz frequency bands. Hughes Application at p. 46.

¹² Hughes Application at pp. 45, 47.

5. Several Second-Round Ka-band applicants filed petitions to deny against these Hughes applications.¹³ The gravamen of these petitions is that Hughes should not be assigned any further orbital locations within that portion of the geostationary satellite orbit arc that reaches the full contiguous United States (“full-CONUS”).

III. DISCUSSION

A. Qualifications

6. All applicants requesting authority to launch and operate satellite space stations must present information sufficient to establish their legal, technical, and financial qualifications to hold a Commission license. The rules set forth in Part 25 of the Commission’s rules govern fixed-satellite service (“FSS”) applicants and licensees, including this application for GSO FSS in the Ka-band frequencies. The Commission modified the Part 25 FSS rules in 1997 to incorporate the particular technical requirements for operations in the Ka-band frequencies.¹⁴ In this and other licenses issued to Second Round FSS applicants in the Ka-band, we will generally apply all Part 25 FSS rules, specifically noting, however, where we decide not to apply existing rules.

1. Number of Orbit Locations

7. The Commission’s Part 25 FSS rules include a limit on the number of orbit locations that may initially be assigned to a qualified GSO FSS applicant.¹⁵ The rules also limit the number of additional, expansion orbit locations that may be assigned to applicants with previously licensed systems using the same frequency bands.¹⁶ Generally, the Commission may grant a waiver of its rules in a particular case only if the relief requested would not undermine the policy objective of the rule in question, and would otherwise serve the public interest.¹⁷ The Commission waived the assignment limit rules in the first Ka-Band GSO FSS round because the applicants had agreed to an arrangement that accommodated all pending applications for space stations and left room for additional assignments.¹⁸ In this Second Round, we have determined that we can also accommodate all pending requests for space stations, with room for additional entry. We therefore again waive application of the Commission rule

¹³ Pacific Century Group, Inc., Petition To Deny Or Condition Grant Of Authorizations, filed May 21, 1999; Pegasus Development Corporation, Consolidated Petition to Deny, filed May 21, 1999; Partial Petition To Deny of TRW, Inc., filed May 21, 1999. All issues pertaining to the assignment of orbit locations are addressed in the orbital assignment order released today. We note, however, that Hughes’s assigned orbit locations are not in the full-CONUS orbital arc.

¹⁴ *Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission’s Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services*, Third Report and Order, 12 FCC Rcd 22310 (1997) (“*Ka-Band FSS Rules Order*”); Memorandum Opinion and Order, FCC 01-172 (rel. May 25, 2001) (order on petitions for clarification or reconsideration).

¹⁵ 47 C.F.R. § 25.140(e).

¹⁶ 47 C.F.R. § 25.140(f).

¹⁷ *WAIT Radio v. FCC*, 418 F.2d 1153, 1157 (D.C. Cir. 1969).

¹⁸ *Ka-Band FSS Rules Order*, 12 FCC Rcd at 22320 ¶ 24.

limiting GSO FSS orbit locations.¹⁹ Consequently, we will not, as some applicants request, limit the number of assignments to Second Round applicants.

2. Technical Qualifications

8. Applicants for FSS space station authorizations must meet the technical qualification requirements set forth in the Commission's Part 25 rules. These requirements are designed primarily to implement two-degree orbital spacing between GSO FSS satellites. The Commission's two-degree spacing policy, which was established in 1983, was designed to maximize the number of satellites in orbit by ensuring that satellites in geostationary-satellite orbit can operate without causing harmful interference to other GSO satellites located as close as two degrees.²⁰

9. In the *Ka-Band FSS Rules Order*, the Commission adopted its proposal to extend its two-degree spacing policy between in-orbit satellites to space stations in the Ka-band.²¹ We believe that it remains in the public interest to maximize the number of satellites that can be accommodated in orbit by extending the Commission's existing two-degree GSO spacing policy to Ka-band orbital assignments in the Second Round. All GSO FSS licensees in the Second Round will therefore be required to be two-degree GSO spacing compliant.

10. Hughes indicates that its system design is consistent with operation in a two-degree spacing environment.²² Our review of Hughes's application finds nothing to preclude operation in a two-degree spacing environment. The Second Round Ka-band applications were received subsequent to the *Ka-Band FSS Rules Order* but prior to the *18 GHz Band Report and Order*.²³ In both orders, rules affecting two-degree orbital spacing were adopted. We remind Hughes of its continuing obligation to meet all Part 25 rules governing system operations, including Sections 25.202 (frequencies, frequency tolerances, and emission limitations) and 25.210 (technical requirements for space stations in the Fixed-Satellite Service).²⁴ Further, Hughes must meet the current Ka-band power flux-density ("PFD") levels of Sections 2.106 US255 and 25.208.²⁵ As a condition of this authorization, Hughes must meet these revised PFD limits.

3. Financial Qualifications

11. The Commission's FSS rules require that an applicant for a new fixed-satellite system possess sufficient financial resources to cover the construction, launch, and first-year operating costs of each proposed satellite.²⁶ We have waived these rules, however, in those cases where we can

¹⁹ For a more detailed discussion, see *Second Round GSO Assignment Order*, at ¶17.

²⁰ *Licensing of Space Stations in the Domestic Fixed-Satellite Service*, 54 Rad. Reg. 2d (P&F) 577, 589 (1983) ("*Two-Degree Spacing Order*").

²¹ *Ka-Band FSS Rules Order*, 12 FCC Rcd at 22320 ¶ 23.

²² Hughes Application at pp. 47-48.

²³ *Redesignation of the 17.7-19.7 GHz Frequency Band, Blanket Licensing of Satellite Earth Stations in the 17.7-20.2 GHz and 27.5-30.0 GHz Frequency Bands, and the Allocation of Additional Spectrum in the 17.3-17.8 GHz and 24.75-25.25 GHz Frequency Bands for Broadcast Satellite-Service Use* 15 FCC Rcd 13430 (2000) ("*18 GHz Band Report and Order*").

²⁴ 47 C.F.R. §§ 25.202 and 25.210.

²⁵ 47 C.F.R. § 25.208.

²⁶ 47 C.F.R. § 25.140(b)-(e).

accommodate all pending applications. The Commission's financial qualification rules are designed to prevent under-capitalized licensees from holding valuable orbit spectrum resources to the exclusion of others while they attempt to arrange financing to construct and launch the licensed system.²⁷ Where all applicants can be accommodated, however, granting a license to an under-capitalized applicant will not prevent another applicant from going forward.²⁸ In addition, there is a pro-competition public interest benefit in licensing all applicants, if possible. We waived the financial qualifications rules for the First Round applicants because all of those applicants could be accommodated in the available orbital locations and there were additional orbital locations available for future entrants.²⁹ In the accompanying *Second Round GSO Assignment Order*, we also determine that we can accommodate all pending Second Round applicants' requests for FSS space stations in the Ka-band, and still have some orbital locations available for future entrants. We therefore waive the financial qualification requirements for Second Round applicants. Consequently, it is unnecessary to rule on Hughes's financial qualifications.

B. Spectrum Assignments

1. Service Links

12. In the *28 GHz Band First Report and Order*, the Commission adopted a band segmentation plan that designated one gigahertz of spectrum in each transmission direction for GSO FSS Ka-band systems.³⁰ For uplink (Earth-to-space) transmissions, the Commission designated 250 megahertz of spectrum between 28.35 and 28.6 GHz, 250 megahertz of spectrum between 29.25 and 29.5 GHz (shared on a co-primary basis with non-geostationary-satellite orbit, mobile satellite service feeder links), and 500 megahertz of spectrum between 29.5 and 30.0 GHz for GSO FSS operations. For downlink (space-to-Earth) communications, the Commission designated 1100 megahertz of spectrum between 17.7 and 18.8 GHz for GSO FSS operations (shared on a co-primary basis with terrestrial fixed-service) and 500 megahertz of spectrum between 19.7 and 20.2 GHz for primary GSO FSS operations. The Commission later refined the downlink plan for the frequency band between 17.7 and 18.8 GHz, by designating 280 megahertz of spectrum between 18.3 and 18.58 GHz for co-primary GSO FSS and terrestrial-fixed operations and 220 megahertz of spectrum between 18.58 and 18.8 GHz for primary GSO FSS operations.³¹

13. In its application, Hughes proposes to use one gigahertz of spectrum at the 28.35-28.6 GHz and 29.25-30.0 GHz frequency bands for its service uplinks. Hughes's request is consistent with the 28 GHz band plan, and we will therefore authorize Hughes to operate in these frequencies, subject to the sharing rules adopted in the *28 GHz Band First Report and Order*. Hughes also requested authorization

²⁷ See generally *Amendment of the Commission's Rules to Establish Rules and Policies Pertaining to a Mobile Satellite Service in the 1610-1626/2483.5-2500 MHz Frequency Bands, Report and Order*, 9 FCC Rcd 5936 at 5948 ¶ 26 (1994) ("*Big LEO Report and Order*").

²⁸ *Id.*

²⁹ See *Ka-Band FSS Rules Order*, 12 FCC Rcd at 22318 ¶ 18.

³⁰ *Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services, First Report and Order and Fourth Notice of Proposed Rulemaking*, 11 FCC Rcd 19005 (1996) ("*28 GHz Band First Report and Order*").

³¹ *18 GHz Band Report and Order*, 15 FCC Rcd 13430. Stations operating in primary services are protected against interference from stations of "secondary" services. Moreover, stations operating in a secondary service cannot claim protection from harmful interference from stations of a primary service. "Co-Primary" services have equal rights to operate in particular frequencies. See 47 C.F.R §§ 2.104(d) and 2.105(c).

to use the 27.5-28.35 GHz frequency band outside the United States. The Commission recently clarified its policy for use of these additional frequencies by U.S.-licensed FSS operators.³² We will authorize Hughes's operations in these bands in accordance with the conditions specified in the *Reconsideration of Ka-Band FSS Rules Order*.

14. In its application, Hughes proposes to use 1.5 gigahertz of spectrum at the 17.8-18.8 GHz and 19.7-20.2 GHz frequency bands for its service downlink bands. We grant this request consistent with the 18 GHz band plan.³³ Specifically, we authorize Hughes to operate its service downlinks in one gigahertz of spectrum in the 18.3-18.8 GHz and 19.7-20.2 GHz frequency bands. Because the 280 megahertz of spectrum at 18.3-18.58 GHz is to be shared on a co-primary basis with terrestrial services, GSO FSS operations in this band must be coordinated with these terrestrial co-primary operations. Hughes also requested authorization to use the 17.8-18.3 GHz frequency band outside the United States. These additional downlink frequencies were also addressed in the recent Commission clarification.³⁴ We will authorize Hughes's operations in these bands in accordance with the conditions specified in the *Reconsideration of Ka-Band FSS Rules Order*.

15. In addition, Hughes must coordinate with U.S. Government systems in accordance with footnote US334 to the Table of Frequency Allocations.³⁵ This footnote requires coordination of commercial systems with U.S. Government GSO and NGSO FSS systems that are presently operating throughout the 17.8-20.2 GHz frequency band. These Government systems operate in accordance with the power flux-density limits contained in the current International Telecommunication Union ("ITU") Radio Regulations.³⁶ Hughes must also comply with footnote US255 to the Table of Frequency Allocations that contains power flux-density limits to protect the Earth exploration satellite service (passive) for the 18.6-18.8 GHz band.³⁷

³² *Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services, Memorandum Opinion and Order*, FCC 01-172 (released May 25, 2001) ("*Reconsideration of Ka-Band FSS Rules Order*").

³³ *See 28 GHz Band First Report and Order*, 11 FCC Rcd 19005, as modified in *18 GHz Band Report and Order*, 15 FCC Rcd at 13443, ¶ 28.

³⁴ *Reconsideration of Ka-Band FSS Rules Order*, FCC 01-172.

³⁵ *See* 47 C.F.R. § 2.106 US334.

³⁶ *See 18 GHz Report and Order*, 15 FCC Rcd at 13473 ¶ 90. The power flux-density limits in the 18.3-18.6 GHz band are -115/-105 dB (W/m²) in any one megahertz band, depending upon the angle of arrival. There are currently no power flux-density limits in the 19.7-20.2 GHz band. *See* Letter from William T. Hatch, National Telecommunications and Information Administration, to Dale Hatfield, Chief, Office of Engineering and Technology, Federal Communications Commission (March 29, 2000).

³⁷ 47 C.F.R. § 2.106 footnote US255 (as revised in the *18 GHz Band Report and Order*, 15 FCC Rcd at 13489) states: In addition to any other applicable limits, the power flux-density across the 200 MHz band 18.6-18.8 GHz produced at the surface of the Earth by emissions from a space station under assumed free-space propagation conditions shall not exceed -95db(W/m²) for all angles of arrival. This limit may be exceeded by up to 3 dB for no more than 5% of the time.

2. Inter-Satellite Links

16. Hughes plans to use optical inter-satellite links (“ISLs”) between adjacent satellites to provide connectivity between the coverage regions of different satellite orbit locations.³⁸ Optical beam communications are not considered a type of radio communication since they operate at frequencies above 300 GHz, and they are not within the jurisdiction of the Communications Act.³⁹

3. Tracking, Telemetry and Command

17. Under the Commission’s rules, tracking, telemetry and command (“TT&C”) operations may be provided at the edges of the frequency bands in which the particular satellite will be providing service.⁴⁰ Hughes proposes to insert normal on-orbit command and telemetry data into its wideband data in the Ka-band.⁴¹ Hughes also proposes to operate transmit and receive beacons in 100 kHz of spectrum near the upper edge of Ka-band allocations, at 18.8 GHz and 28.6 GHz. We authorize Hughes to conduct TT&C operations in these service bands.

18. Hughes also requests authority to conduct TT&C operations outside its Ka-band service frequencies. Hughes proposes to conduct command links in 1.5 megahertz of the 6.425-6.525 GHz frequency band, and to conduct telemetry links in 1.5 megahertz of the 3.65-3.7 GHz frequency band, together with receive beacons operating in 100 kilohertz in the 6.425-6.525 GHz band, and transmit beacons operating in 100 kilohertz of the 3.65-3.7 GHz band.⁴² All of these requested operations are within the C-band frequencies, which are not the system’s service band. Thus, the request is not consistent with Section 25.202 of the rules.⁴³ As the Commission recently indicated, this rule serves the valid purpose of simplifying coordination among satellites at adjacent orbital locations, and promoting efficient spectrum use.⁴⁴ Hughes has not provided a showing to demonstrate that waiver of Section 25.202(g) for TT&C operations outside its service band would be consistent with the basic purpose of the rule, or that the public interest otherwise requires a waiver. Thus we deny Hughes’s request.

³⁸ ISLs are communication links between in-orbit satellites.

³⁹ See 47 U.S.C. §§ 152, 153(33).

⁴⁰ 47 C.F.R § 25.202(g).

⁴¹ Hughes Application at p. 46.

⁴² Hughes Application at p. 46. The Commission has proposed to modify Section 25.202 to permit TT&C operations in the 3.65-3.7 GHz frequencies, if the applicant makes a “particularized showing of need.” *Amendment of the Commission’s Rules With Regard to the 3650-3700 MHz Government Transfer Band*, 15 FCC Rcd 20488, 20539 at ¶ 130 (2000). The Commission specifically sought comment on the types of showings that would warrant such an authorization. *Id.* at ¶ 131. Hughes made no such showing.

⁴³ See *Amendment of the Commission’s Rules With Regard to the 3650-3700 MHz Government Transfer Band*, 15 FCC Rcd at 20538 ¶ 129 (the rule “effectively limits FSS operators to operating TT&C links in the same frequency bands as their FSS operations”).

⁴⁴ *Id.* at ¶¶ 129-130.

C. Regulatory Treatment

19. In the *DISCO I Order*, the Commission determined that all fixed-satellite service operators in the C-band and Ku-band could elect to operate on a common carrier or non-common carrier basis.⁴⁵ The Commission extended this treatment to satellite operators in the Ka-band in the *Ka-Band FSS Rules Order*.⁴⁶ Consequently, Second Round Ka-band applicants may elect their regulatory status. Hughes has elected to offer the entire capacity of its Spaceway EXP™ system – which the satellites authorized by this order will supplement – on a non-common carrier basis, and we authorize it to do so.⁴⁷

D. License Conditions

1. Milestone Schedule

20. As in all other satellite services, all Second Round Ka-band licensees will be required to adhere to a strict timetable for system implementation. This ensures that licensees are building their systems in a timely manner and that the orbit-spectrum resource is not being held by licensees unable or unwilling to proceed with their plans. The implementation schedules for GSO FSS systems in the Ka-band generally track the schedules imposed in other satellite services.

21. Specifically, Section 25.145(f) of the Commission's rules requires Ka-band GSO FSS licensees "[1] to begin construction of [their] first satellite within one year of grant, [2] to begin construction of the remainder within two years of grant, [3] to launch at least one satellite into each of [their] assigned orbit locations within five years of grant, and [4] to launch the remainder of [their] satellites by the date required by the International Telecommunication Union to assure international recognition and protection of those satellites."⁴⁸ Failure to meet any of these construction milestones will render those satellite authorizations null and void without further action by the Commission.

22. The dates by which Hughes's satellites must be "brought into use" to protect the date priority of the U.S. ITU filings for its service links at these orbital locations are in March 2003 – with a two-year extension available under certain circumstances – and June and July 2005.⁴⁹ We recognize that, in this

⁴⁵ See *In the Matter of Amendment to the Commission's Regulatory Policies Governing Domestic Fixed Satellites and Separate International Satellite Systems and DBSC Petition for Declaratory Rulemaking Regarding the Use of Transponders to Provide International DBS Service*, 11 FCC Rcd 2429, 2436 (1996) ("*DISCO I Order*").

⁴⁶ *Ka-Band FSS Rules Order*, 12 FCC Rcd at 22333 ¶¶ 58-60.

⁴⁷ Hughes Application at p. 51.

⁴⁸ 47 C.F.R. § 25.145(f). See also *Ka-Band FSS Rules Order*, 12 FCC Rcd at 22334-35 ¶ 61 & n.77.

⁴⁹ Specifically, the satellite at 131° W.L. must be brought into use by March 9, 2003; the satellites at 26.2° W.L. and 7.5° W.L. must be brought into use by July 2, 2005; and the satellite at 103° E.L. must be brought into use by July 16, 2005. With regard to the 131° W.L. orbital location, ITU Radio Regulations require that the satellite be "brought-into-use" (BIU) no later than five years from the date the ITU publishes the advance publication information. (ITU Radio Regulations Article S11.44). The ITU may extend the BIU date by two years under the conditions specified in ITU Radio Regulations Articles S11.44B through S11.44I (launch failure; launch delays due to circumstances outside the control of the administration or operator; delays caused by modifications of satellite design necessary to reach coordination agreements; problems in meeting the satellite design specifications; delays in reaching coordination after a request for ITU Radiocommunication Bureau assistance; financial circumstances outside the control of the administration or operator; and force majeure). In cases where the two year extension is necessary, the licensee must inform the Commission, in writing, six months before the end of the five year period so that the Commission can timely inform the ITU of the extension request. Should Hughes indeed wish to extend its milestone at the 131° W.L. orbital location to 2005, it must provide the Commission, six months before March 9,

(continued....)

case, comparing these ITU “bringing into use” dates to our launch milestones has the incongruous result of our rules requiring Hughes to launch its satellites into each of its assigned orbit locations by August 2006, *i.e.*, after the date Hughes is required to bring its satellite locations into use to protect the date priority of the U.S. ITU filings for its orbital locations. To address this misalignment, we require Hughes to launch its satellites into each licensed orbit location and “bring into use” all of the frequency assignments it plans to operate at that orbit location by the appropriate ITU “bringing into use” dates. Should the ITU grant a two-year extension of the 2003 “bringing into use date,” the launch milestone in this license will automatically change to the new ITU “bringing into use” date without further Commission action. This will protect the United States filings at these locations and thus, Hughes’s ability to coordinate and gain international recognition for the satellites at each of its assigned orbit locations. Moreover, we do not anticipate that meeting this milestone will be unduly difficult. Under standard industry practice, it generally takes two to three years to construct and launch a satellite.⁵⁰ Hughes will have nearly four years in which to launch its satellites into their assigned locations by the ITU “bringing into use” dates.

2. Reporting Requirements

23. We will follow the Part 25 rules for reporting requirements for FSS systems, including an annual report describing the status of satellite construction and anticipated launch dates, and a detailed description of the use made of each transponder on each of the in-orbit satellites.⁵¹ Hughes must file this report on June 30 of each year, containing information current as of May 31 of that year.

3. International Coordination

24. In general, we will follow the applicable advance-publication, coordination, and notification procedures as set forth in the ITU Radio Regulations in coordinating Hughes’s satellites with other affected administrations. We will also require that Hughes provide the Commission with the international coordination information required by our rules.⁵² The orbit locations assigned today may be co-located or within two degrees of a non-U.S. licensed satellite filing having date priority in its ITU filings. Under these circumstances, U.S. licensees assigned to these locations are reminded that they take these licenses subject to the outcome of the international coordination process, and that the Commission is not responsible for the success or failure of the required international coordination. In addition, the Commission has negotiated operated arrangements with a Japanese operator pursuant to a coordination agreement with the administration of Japan, for one of the orbital locations assigned to Hughes in this

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2003, information demonstrating good cause to request an ITU extension on the grounds specified in the ITU Radio Regulations. As to Hughes’s remaining orbital location assignments, ITU Radio Regulations require that these satellites be brought into use no later than nine years from the date the ITU publishes the advance publication information. The ITU initially required that these locations be brought into use within six years after receipt of their advance publication information, with an option to extend that date by an additional three years upon request. Since WRC-2000, satellite networks at orbit locations whose advance publication information was received by the ITU before November 22, 1997 have been automatically granted the optional three-year extension. Because the four orbit locations assigned to Hughes fall in this category, their June and July 2005 bring into use dates cannot be further extended.

⁵⁰ See, *e.g.*, *In the Matter of the Application of Comsat Corp.*, 12 FCC Rcd 12059, 12075 ¶ 33 n. 68 (1997) (“It has been our experience that it takes an average of two years to construct and launch a satellite....”).

⁵¹ See 47 C.F.R. § 25.210(1)(1)(2)(3).

⁵² See 47 C.F.R. § 25.111(b).

proceeding.⁵³ Hughes is required to operate its satellite at this location in a manner consistent with these arrangements.

IV. CONCLUSION

25. Upon review of Hughes's application, we find that Hughes is qualified to be a Commission licensee and that, pursuant to Section 309 of the Communications Act of 1934, as amended, 47 U.S.C. § 309, grant of this application will serve the public interest, convenience, and necessity. As specified in the *Second Round GSO Assignment Order*, we have assigned Hughes to the 131° W.L, 26.2° W.L., 7.5° W.L. and 103° E.L. orbital locations.

V. ORDERING CLAUSES

26. IT IS ORDERED that Application File Nos. 45-SAT-P/LA-98, 46-SAT-P/LA-98, 47-SAT-P/LA-98, and 48-SAT-P/LA-98 ARE GRANTED IN PART, as discussed above, and Hughes Communications, Inc. IS AUTHORIZED to launch and operate eight GSO FSS satellites, to provide fixed-satellite service in the 18.3-18.8, 19.7-20.2, 28.35-28.6, and 29.25-30.0 GHz frequency bands at the 131° W.L, 26.2° W.L., 7.5° W.L. and 103° E.L. orbital locations.

27. IT IS FURTHER ORDERED that Hughes Communications, Inc. is authorized to transmit in the 17.8-18.3 GHz frequency bands to earth stations in foreign countries, and receive transmissions from such earth stations in the 27.5-28.35 GHz bands, in accordance with the technical specifications set forth in its application and the pertinent provisions of Part 25 of the Commission's rules.

28. IT IS FURTHER ORDERED that when requesting international coordination of proposed use of frequencies in the 17.8-18.3 GHz band for downlinks to earth stations in foreign countries, Hughes Communications, Inc. shall certify in an affidavit filed with the Satellite and Radiocommunication Division of the Commission's International Bureau, that it has coordinated the proposed operation with other licensees with authority from this Commission for non-U.S. geostationary or non-geostationary satellite operation in that band. When requesting international coordination of proposed use of frequencies in the 27.5-28.35 GHz band for links with earth stations in foreign countries, Hughes Communications, Inc. shall certify that it has coordinated the proposed operation with other licensees with authority from the Commission for non-U.S. geostationary satellite operation in that band. The filing shall include certification of service on the licensees with whom such coordination is required.

29. IT IS FURTHER ORDERED that Hughes Communications, Inc.'s authorization shall become NULL and VOID with no further action on the Commission's part in the event the space station is not constructed, launched, and placed into operation in accordance with the technical parameters and terms and conditions of this authorization by the following dates:

⁵³ Specifically, operating arrangements between the United States Ka-band satellite network at 103° E.L. and the Ka-band portion of the DRTS-W, DRTS-90.75E and DRTS-91E satellite networks at the 90° E.L., 90.75° E.L. and 91° E.L. orbit locations, respectively, have been negotiated with the Japanese operator at its request. A copy of the relevant portions of these arrangements is available to Hughes upon request.

<u>Construction Commenced</u>		<u>Launch and Operate</u>	
First satellite	August 2002	131° W.L. Orbit Location	March 9, 2003 ⁵⁴
Remaining satellites	August 2003	26.2° W.L. Orbit Location	July 2, 2005
		7.5° W.L. Orbit Location	July 2, 2005
		103° E.L. Orbit Location	July 16, 2005

30. IT IS FURTHER ORDERED that Hughes Communications, Inc. must coordinate its Ka-band downlink operations with the U.S. Government systems including Government operations to earth stations in foreign countries, in accordance with footnote US334 to the Table of Frequency Allocations, 47 C.F.R. § 2.106, and in accordance with the *18 GHz Report and Order*, 15 FCC Rcd at 13473 ¶ 90.

31. IT IS FURTHER ORDERED that Hughes Communications, Inc. shall conduct its operations pursuant to this authorization in a manner consistent with the power flux-density requirements of 47 C.F.R. § 2.106 US255 and 47 C.F.R. § 25.208.

32. IT IS FURTHER ORDERED that the license term for each space station is ten years and will begin to run on the date Hughes Communications, Inc. certifies to the Commission that the authorized satellite has been successfully placed into orbit and the operations fully conform to the terms and conditions of this authorization.

33. IT IS FURTHER ORDERED that Hughes Communications, Inc. will prepare any necessary submissions to the International Telecommunication Union and to affected administrations for the completion of the appropriate coordination and notification obligations for these space stations in accordance with the International Telecommunication Union Radio Regulations. We also remind Hughes Communications, Inc. that no protection from interference caused by radio stations authorized by other administrations is guaranteed unless coordination procedures are timely completed or, with respect to individual administrations, by successfully completing coordination agreements. Any radio station authorization for which coordination has not been completed may be subject to additional terms and conditions as required to effect coordination of the frequency assignments of other administrations, 47 C.F.R. § 25.111(b). Further, Hughes Communications, Inc. must operate its satellites in accordance with any international coordination agreements already in existence.

34. IT IS FURTHER ORDERED that the temporary assignment of any orbital location to Hughes Communications, Inc. is subject to change by summary order of the Commission on 30 days notice and does not confer any permanent right to use the orbit and spectrum. Neither this authorization nor any right granted by this authorization, shall be transferred, assigned or disposed of in any manner, voluntarily or involuntarily, or by transfer of control of any corporation holding this authorization, to any person except upon application to the Commission and upon a finding by the Commission that the public interest, convenience and necessity will be served thereby.

35. IT IS FURTHER ORDERED that Hughes Communications, Inc. is afforded 30 days from the date of the release of this order and authorization to decline this authorization as conditioned. Failure to respond within that period will constitute formal acceptance of the authorization as conditioned.

⁵⁴ If the International Telecommunication Union grants a two-year extension of this date, this milestone will automatically change to March 9, 2005 without further Commission action.

36. This Order is issued pursuant to Section 0.261 of the Commission's rules on delegations of authority, 47 C.F.R. § 0.261, and is effective upon release. Petitions for reconsideration under Section 1.106 or applications for review under Section 1.115 of the Commission's rules, 47 C.F.R. §§ 1.106, 1.115, may be filed within 30 days of the date of public notice of this Order (see 47 C.F.R. § 1.4(b)(2)).

FEDERAL COMMUNICATIONS COMMISSION

Donald Abelson
Chief, International Bureau