

Before the

FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)	
)	
Columbia Communications Corporation,)	Call Sign: S2415
Application for Modification)	File No. SAT-MOD-20020517-00078
of Authorization to Launch and)	SAT-AMD-20040826-00161
Operate a C-Band Satellite at 37.5° W.L.)	SAT-STA-20040916-00180
)	
SES Americom, Inc., Request for Special)	Call Sign: S2448
Temporary Authority to Operate Satcom C-1)	File No. SAT-STA-20041213-00219
at 37.5° W.L.)	

ORDER AND AUTHORIZATION

Adopted: January 28, 2005

Released: January 28, 2005

By the Deputy Chief, Satellite Division, International Bureau:

I. INTRODUCTION

1. By this Order, we grant Columbia Communications Corporation’s (“Columbia’s”) request to make certain technical changes to the design of its C-band¹ replacement satellite at 37.5° W.L.² Additionally, pursuant to Columbia’s November 29, 2004 request, we defer action on Columbia’s request to switch the milestone schedule of its C-band satellite authorization at 37.5° W.L. with the C-band satellite authorization at 47° W.L.³ By these actions, we allow Columbia the flexibility to implement its business plans without impairing service to its customers.

II. BACKGROUND

2. *37.5° W.L. Replacement Authorization and Petition For Reconsideration.* Columbia, a wholly owned subsidiary of SES Americom, Inc. (“SES Americom”), holds a number of satellite licenses in its own name. In 2001, the International Bureau (“Bureau”) granted Columbia authority to launch and operate a replacement satellite in the C-band at the 37.5° W.L.

¹ For purposes of this Order, “C-band” denotes the 3700-4200 MHz and 5925-6425 MHz frequency bands.

² Columbia Communications Corporation, Authorization to Launch and Operate a Geostationary C-band Replacement Satellite in the Fixed-Satellite Service at 37.5° W.L., *Memorandum Opinion and Order*, 16 FCC Rcd 20176 (Int’l Bur. 2001) (“*2001 Columbia 37.5° W.L. Replacement Authorization*”).

³ Letter From Peter A. Rohrbach, Counsel for Columbia Communications Corporation to Marlene H. Dortch, Secretary, Federal Communications Commission, dated November 29, 2004.

orbital location.⁴ This satellite, SES Americom-12 (“AMC-12”),⁵ was intended to replace the Columbia 515 satellite, which was expected to reach its end-of-life during the second half of 2002. The *2001 Columbia 37.5° W.L. Replacement Authorization* required Columbia to complete construction of AMC-12 by November 2005 and launch the satellite by February 2006.⁶ At the same time, the *2001 Columbia 37.5° Replacement Authorization* also required Columbia to bring the replacement satellite into service before it retired Columbia 515 satellite, in the event that the end of the useful life of the Columbia 515 satellite occurs before the February 2006 launch milestone for AMC-12.⁷ This condition was intended to ensure continuity of service to Columbia's customers.⁸ On December 19, 2001, Columbia filed a petition for reconsideration challenging this condition and arguing that the Bureau should allow Columbia the opportunity to fill any service gap by means other than bringing AMC-12 into use prior to Columbia 515's retirement.⁹

3. *Satcom C-1 Relocation to 37.5° W.L. from 79° W.L.* In 2002, SES Americom requested special temporary authority (STA) to relocate its C-band Satcom C-1 satellite from 79° W.L. orbital location to 37.5° W.L. orbital location because it expected Columbia 515 to reach the end of its useful life in October 2002.¹⁰ Columbia asserted that grant of the request would allow it to provide service to customers until it is ready to launch AMC-12. The Bureau granted the STA and subsequent additional STAs for the same purpose.¹¹ On December 13, 2004, SES Americom filed a final STA to operate Satcom C-1 at 37.5° W.L. orbital location for a period of six months through June 17, 2005.¹²

4. *Technical Modifications.* In 2002, Columbia filed an application to modify many of AMC-12's technical specifications.¹³ We placed this application on public notice on June 3,

⁴ *2001 Columbia 37.5° W.L. Replacement Authorization*, 16 FCC Rcd 20176.

⁵ The replacement satellite was not originally designated as AMC-12, but for ease of reference, we will refer to it as AMC-12 in this order.

⁶ *2001 Columbia 37.5° W.L. Replacement Authorization*, 16 FCC Rcd at 20181, para. 18.

⁷ *Id.*, 16 FCC Rcd at 20180-81, paras. 14 and 19.

⁸ *Id.*, 16 FCC Rcd at 20180-81, para. 14.

⁹ Petition for Reconsideration filed by Columbia Communications Corporation on December 14, 2001 (“Columbia Petition for Reconsideration”). In its petition, Columbia relies upon Hughes Communications Galaxy, Inc., *Order and Authorization*, 5 FCC Rcd 3423 (Common Carrier Bureau 1990) and Hughes Communications Galaxy, Inc., *Order and Authorization*, 8 FCC Rcd 4170 (Common Carrier Bureau 1993) (granting an extension of milestones where the licensees had proposed to cover potential gap in service by either moving another satellite or using capacity at adjacent orbital slot).

¹⁰ IBFS File Nos. SAT-STA-20020517-00076.

¹¹ See IBFS File No. SAT-STA-20020517-00076 (granted on July 17, 2002), File No. SAT-STA-20021121-00223 (granted on August 15, 2003), File No. SAT-STA-20030613-00106 (granted on August 15, 2003), File No. SAT-STA-20031215-00356 (granted on August 24, 2004), and File No. SAT-STA-20040614-00115 (granted on August 24, 2004).

¹² IBFS File No. SAT-STA-20041213-00219.

¹³ IBFS File No. SAT-MOD-20020517-00078 at 3-6 and Att. 2 (“Columbia Modification”).

2002.¹⁴ No comments were received. In August 2004, Columbia filed an amendment updating AMC-12's technical characteristics to reflect its as-built characteristics. Specifically, the amendment indicated that the equivalent isotropically radiated power ("EIRP") levels are higher than originally expected.¹⁵ The amendment also provides information regarding the satellite's antenna gain contours, provides a new polarization plan for the satellite, and indicates that the spacecraft will be equipped with a polarization switch.¹⁶ This amendment was placed on public notice on September 24, 2004. New Skies Satellites, N.V. ("New Skies") filed comments asking us to impose certain conditions on AMC-12's operation.¹⁷ Columbia filed a reply.¹⁸

5. *Testing STA.* On September 16, 2004, Columbia filed a request for special temporary authority to test AMC-12 satellite at the 67.5° W.L. orbital location. Columbia states that grant of its request will not cause harmful interference to other spacecraft because the closest commercial C-band satellites - the Brasilsat B2 spacecraft at 65° W.L. orbital location and the Brasilsat B1 spacecraft at 70° W.L. orbital location - both operated by Star One S.A., are more than two degrees away from 67.5° W.L. orbital location. Columbia states that it has coordinated the proposed testing of AMC-12 at 67.5° W.L. orbital location with Star One, S.A.¹⁹

III. DISCUSSION

6. As explained below, we grant Columbia's request to make technical changes to the design of AMC-12, deny New Skies's request to condition the AMC-12 authorization, and grant Columbia's petition for reconsideration *2001 Columbia 37.5° W.L. Replacement Authorization*.

7. *Technical Modification and Amendment.* In its 2002 modification request, Columbia modifies the beam arrangement from the previous design by consolidating two North American and two South American beams into single beams for North America and South America respectfully.²⁰ In addition, Columbia changes the switching and transponder arrangements to allow for full frequency reuse on all beams. Accordingly, the modification request shows that,

¹⁴ Policy Branch Information, *Public Notice*, Report No. SAT-00112 (released June 3, 2002).

¹⁵ IBFS File No. SAT-AMD-20040826-00161 ("August 2004 technical amendment").

¹⁶ *Id.*

¹⁷ Comments filed by New Skies Satellites, N.V., dated October 22, 2004 ("New Skies Comments"). Specifically, New Skies requests that the Commission condition the grant of Columbia's amendment upon: (1) the completion of coordination with New Skies and operation consistent with any new coordination agreement; and (2) requiring Columbia to operate within the parameters of the existing coordination agreement until a new agreement is put in place. *Id.*

¹⁸ Reply to Comments filed by Columbia Communications Corporation, dated November 4, 2004 (Columbia Comments). In its Reply, Columbia opposes all of New Skies' proposed conditions as unnecessary in light of Commission precedent. *Id.* (citing GE American Communications, Inc., *Memorandum Opinion, Order and Authorization*, 15 FCC Rcd 19671 (2000) and *Assignment of Orbital Locations to Space Stations in the Domestic Fixed-Satellite Service, Memorandum Opinion and Order*, 5 FCC Rcd 179, 183 (1990)).

¹⁹ Columbia further asserts that the only other commercial C-band satellite within six degrees of 67.5° W.L. orbital location is the AMC-6 spacecraft at 72° W.L. orbital location, which is operated by Columbia's parent, SES Americom. Columbia Comments.

²⁰ Columbia Modification, Att. 2 at page 2-4.

under the revised design, the AMC-12 satellite will be an active repeater communications satellite, for use in the conventional C-band, 3700-4200, 5925-6425 MHz.²¹ Under the modified design, AMC-12 will utilize seventy two transponders each transponder with 36 megahertz of bandwidth²² and will have a total of three coverage area beams, one for North America, one for South America, and one for Europe and Africa.

8. In the August 2004 technical amendment, Columbia indicates that the EIRP levels for the satellite, as measured by the manufacturer, are higher than Columbia had previously indicated.²³ The amendment also provides information regarding the satellite's antenna gain contours, provides a new polarization plan for the satellite, and indicates that the spacecraft will be equipped with a polarization switch.²⁴ Columbia provided an analysis showing that its amended technical design meets all of the Commission's technical requirements governing two-degree orbital spacing.²⁵

9. Given constantly evolving satellite technology and the several year-period required to construct a satellite, we often receive requests from licensees to modify the technical design of the satellites they are constructing. We generally allow licensees to make the proposed modifications, provided the modifications are consistent with Commission policies and do not present any significant interference problems.²⁶ In this instance, Columbia's proposed technical changes are compliant with the Commission's technical rules.

10. New Skies, however, asks us to condition grant of Columbia's August 2004 technical amendment upon Columbia's completing coordination of AMC-12 with the New Skies's NSS-806 C-band satellite currently operating at the 40.5° W.L. orbital location. In doing so, however, New Skies overlooks the condition placed upon its grant of authority to serve the U.S. market using NSS-806.²⁷ In adding NSS-806 to the Commission's Permitted Space Station List ("Permitted List"),²⁸ the Commission found that several of New Skies's satellites, including

²¹ Columbia Modification, Att. 2 at page 2-4.

²² Columbia Modification, Att. 2 at page 2-4.

²³ August 2004 technical amendment.

²⁴ *Id.*

²⁵ Columbia Comments. The Commission's technical rules are designed to ensure that co-frequency, co-coverage satellites can operate at two-degree orbital spacings without causing mutual harmful interference. Licensing of Space Stations in the Domestic Fixed-Satellite Service, *Report and Order*, 54 Rad. Reg. 2d 577 (1983), summary printed in Licensing Space Stations in the Domestic Fixed-Satellite Service, 48 Fed. Reg. 40,233 (Sept. 6, 1983) ("*Two Degree Spacing Order*").

²⁶ *See, e.g., Teledesic LLC*, 14 FCC Rcd 2261 (Int'l Bur. 1999); *GTE Spacenet Corp.*, 5 FCC Rcd 4112 (Com. Car. Bur. 1990); *American Satellite Co.*, 5 FCC Rcd 1186 (Com. Car. Bur. 1990).

²⁷ New Skies Comments. The NSS-806 satellite was added to the Commission's Permitted List in 2001. New Skies Satellites, N.V., DA 01-513, *Order*, 16 FCC Rcd. 7482 (rel. March 29, 2001) ("*NSS-806 Permitted List Order*").

²⁸ The "Permitted List" denotes all satellites with which U.S. earth stations with routinely authorized technical parameters operating in the conventional C- and Ku-bands are permitted to communicate without additional Commission action. The communications, however, must fall within the same technical parameters and conditions established in the earth station's license. Amendment of the Commission's Regulatory Policies to Allow Non-U.S.- Licensed Space Stations to Provide Domestic and International

NSS-806, did not comply with all of the Commission's technical rules.²⁹ Nevertheless, because there were no U.S.-licensed satellites operating two degrees away from NSS-806 at the time, the Commission granted New Skies conditional waivers of the technical rules NSS-806 did not meet. The condition provided that earth stations operating with NSS-806 must do so on a non-harmful interference basis with respect to any future adjacent two-degree spacing compliant satellite authorized to serve the United States in the event that New Skies and the adjacent satellite operator could not, in good faith, reach a coordination agreement.³⁰ New Skies does not dispute that AMC-12 is technically compliant with the Commission's two-degree spacing policy.³¹ Accordingly, we will not impose a condition on the AMC-12 license that would, in essence, negate a condition of NSS-806's access to the U.S. Market and provide a satellite that does not comply with the Commission's technical rules equal status to one that does.

11. Even assuming, however, that NSS-806 complied with the Commission's rules, the Commission has stated that it expects licensees to bear the responsibility of coordinating adjacent satellites because they are in the best position to determine the technical and economic tradeoffs inherent in reaching a coordination agreement.³² The Commission does not become involved in these coordination efforts unless the parties are unable to reach an agreement and request that we participate. Columbia and New Skies previously reached a coordination agreement with respect to the operation of their respective C-band satellites at the 37.5° W.L. and 40.5° W.L. orbital locations.³³ We expect that with good faith efforts, New Skies and Columbia should be able to modify their existing coordination agreement. Therefore, we find that the conditions proposed by New Skies are redundant with the standard obligations of existing U.S.-licensed satellite operators to negotiate coordination agreements in good faith and are otherwise unnecessary.

Satellite Service in the United States, *First Order on Reconsideration*, IB Docket No. 96-111, 15 FCC Rcd 7207, 7209-10, 14 (paras. 10, 16) (1999) ("*DISCO II First Reconsideration Order*") (adopting procedures by which the operators of in-orbit non-U.S. satellites could request to serve the U.S. market).

²⁹ Specifically, NSS-806 does not meet the Commission's polarization requirements or the FM/TV frequency plan requirement. See 47 C.F.R. §§ 25.210(a)(1), 25.210(a)(3), and 25.211(a). Further, it does not operate on permitted tracking, telemetry, and telecommand frequencies. 47 C.F.R. § 25.202 (g). New Skies Satellites, N.V., DA 01-513, *Order*, 16 FCC Rcd. 7482 (rel. March 29, 2001) ("*NSS-806 Permitted List Order*").

³⁰ *Id.* at para 15. These conditions were drawn from the *New Skies Market Access Order*. New Skies Satellites, N.V., *Order and Authorization*, 14 FCC Rcd 13003, 13038 (paras. 78-79) (1999) ("*New Skies Market Access Order*"). The Commission stated it would remove this non-harmful interference condition only if New Skies committed, in pertinent part, that two-degree compliant U.S. Satellites spaced at least two degrees from NSS-806 are assumed to be fully coordinated. *Id.* at para 16. In both that order and the *NSS-806 Permitted List Order*, we recognized that any such commitment from New Skies would need the concurrence of the Netherlands Administration, and that the Netherlands Administration is under no obligation to give its concurrence. *Id.* at para. 78; *NSS-806 Permitted List Order*, para 16. The record does not reflect that New Skies has made this commitment.

³¹ The two-degree spacing requirement is for FSS satellites in geostationary satellite orbit. The Commission's two-degree spacing policy is the cornerstone of our orbital assignment plan for FSS satellites in geostationary satellite orbits. Adopted in 1983, this policy was designed to maximize the number of satellites that could be accommodated in orbit at C-and Ku-bands to meet the increasing demand for satellite services in these bands. *Two Degree Spacing Order*, 54 Rad. Reg. 2d 577.

³² See, e.g., *Assignment of Orbital Locations to Space Stations in the Domestic Fixed-Satellite Service*, 5 FCC Rcd 179, 181 (1990).

³³ August 2004 Technical Amendment, Attachment 1.

12. *Petition for reconsideration.* We have authorized Columbia to operate the Satcom C-1 satellite at the 37.5° W.L. orbital location for over 2 years in order to ensure continuity of service for Columbia's customers at that location.³⁴ Thus, Columbia has satisfied the underlying purpose of the condition requiring it to launch and operate a replacement satellite prior to retiring the Columbia 515 satellite, *i.e.*, continuity of service to customers. Accordingly, we grant Columbia's petition for reconsideration of the *2001 Columbia 37.5° W.L. Replacement Authorization* to the extent necessary to allow it to provide service through Satcom C-1 until AMC-12 is launched and brought into operation consistent with the launch milestones contained in condition 18 of the *2001 Columbia 37.5° W.L. Replacement Authorization*.

V. ORDERING CLAUSES

13. Accordingly, IT IS ORDERED, pursuant to Sections 0.51, 0.261, 25.117(d) of the Commission's rules, 47 C.F.R. §§ 0.51, 0.261, 25.117(d), that the modification request filed by Columbia Communications Corporation on May 9, 2002, IBFS File No. SAT-MOD-20020517-00078, IS GRANTED, in part, to extent indicated above, and otherwise IS DEFERRED and that the amendment filed on August 26, 2004, IBFS File No. SAT-AMD-20040826-00161, IS GRANTED.

14. IT IS FURTHER ORDERED that Columbia shall provide a written statement to the Commission within 60 days of the date of this grant that identifies any known satellites located at, or planned to be located at, Columbia's assigned orbital location, or assigned in the vicinity of that location such that the station-keeping volume of the respective satellites might overlap, and that states the measures that will be taken to prevent in-orbit collisions with such satellites. This statement should address any licensed FCC systems, or any systems applied for and under consideration by the FCC. The statement need not address every filing with the ITU that meets these criteria, but should assess and address any systems reflected in ITU filings that are in operation or that Columbia believes may be progressing toward launch, *e.g.*, by the appearance of the system on a launch vehicle manifest. If Columbia elects to rely on coordination with other operators to prevent in-orbit collisions, it shall provide a statement as to the manner in which such coordination will be effected. This grant does not in any way constitute an approval of Columbia's post-mission disposal plan for AMC-12.

15. IT IS FURTHER ORDERED that Columbia shall prepare the necessary information, as may be required, for submission to the International Telecommunication Union ("ITU") to initiate and complete the advance publication, international coordination, due diligence, and notification process of this space station, in accordance with the ITU Radio Regulations. Columbia shall be held responsible for all cost recovery fees associated with these ITU filings. We also note that no protection from interference caused by radio stations authorized by other administrations is guaranteed unless coordination and notification 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. *See* 47 C.F.R. § 25.111(b).

16. IT IS FURTHER ORDERED that the request for extension of Special Temporary Authority as previously conditioned, filed by SES Americom, Inc., on December 13, 2004, File No. SAT-STA-20041213-00219, IS GRANTED. This extension of Special Temporary Authority

³⁴ *See* note 11 above.

permits the Satcom C-1 to continue C-band operations from 37.5° W.L. orbital location until June 17, 2005.

17. IT IS FURTHER ORDERED that the request for Special Temporary Authority, filed by Columbia Communications Corporation on September 16, 2004, IBFS File No. SAT-STA-20040916-00180, IS GRANTED and Columbia is authorized to conduct in-orbit-testing of the AMC-12 satellite at the 67.5° W.L. orbital location for a 60-day period, consistent with the terms and specifications set forth in its application subject to the following conditions:

- (a) Columbia will coordinate its test operations with all potentially affected operating satellite networks;
- (b) that no harmful interference shall be caused to any lawfully operating radiocommunication systems and Columbia's operations shall cease immediately upon notification of such harmful interference. Further, Columbia shall notify the Commission in writing that it has received such a notification within 3 days of receipt;
- (c) Columbia shall accept interference from any lawfully operating satellite network or radiocommunication system;
- (d) testing authority is limited to those frequencies for which the AMC-12 satellite is authorized;
- (e) this authorization is subject to change in any of its terms or cancellation in its entirety at any time upon reasonable notice, but without hearing, if in the opinion of the Commission, circumstances should require;
- (f) this temporary authority shall commence on the date Columbia launches the AMC-12 satellite, and will terminate 60 days from that date;
- (g) this temporary authority is only for testing purposes and shall not be used for the provision of commercial service;
- (h) any extension of this authorization must be requested and approved in writing.
- (i) Columbia shall notify the Commission in writing no later than seven days after it has completed testing of AMC-12 and commenced the move of AMC-12 to its assigned orbital location of 37.5° W.L.
- (j) Columbia shall coordinate its Tracking, Telemetry, Command, and Monitoring ("TTC&M") operations with existing geostationary satellites to ensure that no unacceptable interference results from its TTC&M operations during the drift from 67.5° W.L. to its assigned orbital location of 37.5° W.L.

18. This Order is issued pursuant to Section 0.261 of the Commission's rules on delegated 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 the release of this Order. (*See* 47 C.F.R. § 1.4(b)(2).)

FEDERAL COMMUNICATIONS COMMISSION

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