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File Number: SAT-MOD-20050322-00069

FCC APPLICATION FOR SPACE AND EARTH STATION:MOD OR AMD - MAIN FORM

FCC Use Only

FCC 312 MAIN FORM FOR OFFICIAL USE ONLY

APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:

TELSTAR 11 MODIFICATION TO RELOCATE

1-8. Lega	Name of Applicant
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Name: Lo

Loral Orion, Inc.

Phone Number:

908-470-2342

DBA

Fax Number:

908-470-2453

Name: Street:

500 Hills Drive

E-Mail:

se@loralskynet.com

-7018

P.O. Box 7018

City:

Bedminster

State:

NJ

Country:

USA

Zipcode:

07921

Attention: Mr STANLEY EDINGER

9-16. Name of Contact Representative (If other than applicant)

Name: Mr STANLEY EDINGER

Phone Number: 908-470-2342

Company: Loral Skynet

Fax Number: 908-470-2453

Street: 500 Hills Drive

E-Mail: se@loralskynet.com

P.O. Box 7018

Bedminster

City:

State:

NJ

Country:

USA

Zipcode: 07921-7018

Contact

MANAGER GOVERNMENT

Relationship:

Same

Title: R

RELATIONS

CLASSIFICATION OF FILING

17. Choose the button next to the classification that applies to this filing for both questions a. and b. Choose only one for 17a and only one for 17b.

o al. Earth Station

a2. Space Station

(N/A) b1. Application for License of New Station

(N/A) b2. Application for Registration of New Domestic Receive-Only Station

(N/A) b3. Amendment to a Pending Application

(N/A) b4. Modification of License or Registration

b5. Assignment of License or Registration

b6. Transfer of Control of License or Registration

O (N/A) b7. Notification of Minor Modification

(N/A) b8. Application for License of New Receive-Only Station Using Non-U.S. Licensed Satellite

(N/A) b9. Letter of Intent to Use Non-U.S. Licensed Satellite to Provide Service in the United States

O (N/A) b10. Other (Please specify)

17c. Is a fee submitted with this applie If Yes, complete and attach FCC For Office Governmental Entity Other(please explain):	rm 159. If No, indicate reason for fee exemption	on (see 47 C.F.R.Section 1.1114).
17d. Fee Classification BFY - Space Station	n Modification(Geostationary)	
18. If this filing is in reference to an existing station, enter:	19. If this filing is an amendment to a pendi modification please enter only the file numb	ing application enter both fields, if this filing is a
(a) Call sign of station: ORIONF1	(a) Date pending application was filed:	(b) File number: SATLOA1988060100047

TYPE OF SERVICE

20. NATURE OF SERVICE: This filing is for an authorization to provi-	de or use the following type(s) of service(s): Select all that apply:
a. Fixed Satellite	
b. Mobile Satellite	
c. Radiodetermination Satellite	
d. Earth Exploration Satellite	
e. Direct to Home Fixed Satellite	
f. Digital Audio Radio Service	
g. Other (please specify)	
21. STATUS: Choose the button next to the applicable status. Choose	22. If earth station applicant, check all that apply.
only one. Common Carrier Non-Common Carrier	Using U.S. licensed satellites
6 Common Carrier	Using Non-U.S. licensed satellites
23. If applicant is providing INTERNATIONAL COMMON CARRIER facilities:	service, see instructions regarding Sec. 214 filings. Choose one. Are these
O Connected to a Public Switched Network O Not connected to	a Public Switched Network N/A
24. FREQUENCY BAND(S): Place an 'X' in the box(es) next to all	applicable frequency band(s).
a. C-Band (4/6 GHz) b. Ku-Band (12/14 GHz)	
c.Other (Please specify upper and lower frequencies in MHz.)	
Frequency Lower: Frequency Upper: (Please specify additi	onal frequencies in an attachment)

TYPE OF STATION

25. CLASS OF STATION: Choose the button next to the	class of station that applies. Choos	se only one.	
O a. Fixed Earth Station			
O b. Temporary-Fixed Earth Station			
O c. 12/14 GHz VSAT Network			
O d. Mobile Earth Station			
e. Geostationary Space Station			
o f. Non-Geostationary Space Station			
O g. Other (please specify)			
26. TYPE OF EARTH STATION FACILITY: Transmit/Receive Transmit-Only "For Space Station applications, select N/A."	ive-Only N/A		

PURPOSE OF MODIFICATION

27. The purpose of this proposed modification is to: (Place an 'X' in the box(es) next to all that apply.)
a — authorization to add new emission designator and related service
b — authorization to change emission designator and related service
c — authorization to increase EIRP and EIRP density
d — authorization to replace antenna
e — authorization to add antenna
f — authorization to relocate fixed station
g — authorization to change frequency(ies)
h — authorization to add frequency
i — authorization to add Points of Communication (satellites & Double of Communication)
j — authorization to change Points of Communication (satellites & amp; countries)
k — authorization for facilities for which environmental assessment and
radiation hazard reporting is required
1 — authorization to change orbit location
m — authorization to perform fleet management
n — authorization to extend milestones
o — Other (Please specify)

ENVIRONMENTAL POLICY

28. Would a Commission grant of any proposal in this application or amendment have a significant environmental impact as defined by 47 CFR 1.1307? If YES, submit the statement as required by Sections 1.1308 and 1.1311 of the Commission's rules, 47 C.F.R. 1.1308 and 1.1311, as an exhibit to this application. A Radiation Hazard Study must accompany all applications for new transmitting facilities, major modifications, or major amendments.

O Yes O No

ALIEN OWNERSHIP Earth station applicants not proposing to provide broadcast, common carrier, aeronautical en route or aeronautical fixed radio station services are not required to respond to Items 30-34.

29. Is the applicant a foreign government or the representative of any foreign government?

O Yes O No O N/A

30. Is the applicant an alien or the representative of an alien?

O Yes O No O N/A

31. Is the applicant a corporation organized under the laws of any foreign government?

O Yes No O N/A

32. Is the applicant a corporation of which more than one—fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?

O Yes O No O N/A

33. Is the applicant a corporation directly or indirectly controlled by any other corporation of which more than one—fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	•	Yes	0	No	O N/A
34. If any answer to questions 29, 30, 31, 32 and/or 33 is Yes, attach as an exhibit an identification of the aliens or foreign entities, their nationality, their relationship to the applicant, and the percentage of stock they own or vote.	A				
BASIC QUALIFICATIONS					
35. Does the Applicant request any waivers or exemptions from any of the Commission's Rules? If Yes, attach as an exhibit, copies of the requests for waivers or exceptions with supporting documents.		0	Yes	•	No No
36. Has the applicant or any party to this application or amendment had any FCC station authorization or license revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or		•	Yes	0) No
construction permit denied by the Commission? If Yes, attach as an exhibit, an explination of circumstances.	D				

37. Has the applicant, or any party to this application or amendment, or any party directly or indirectly controlling the applicant ever been convicted of a felony by any state or federal court? If Yes, attach as an exhibit, an explination of circumstances.	○ Yes	No
38. Has any court finally adjudged the applicant, or any person directly or indirectly controlling the applicant, guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement or any other means or unfair methods of competition? If Yes, attach as an exhibit, an explanation of circumstances	O Yes	No
39. Is the applicant, or any person directly or indirectly controlling the applicant, currently a party in any pending matter referred to in the preceding two items? If yes, attach as an exhinit, an explanation of the circumstances.	O Yes	No
40. If the applicant is a corporation and is applying for a space station license, attach as an exhibit the names, address, and citizenship of those stockholders owning a record and/or voting 10 percent or more of the Filer's voting stock and the percentages so held. In the case of fiduciary control, indicate the beneficiary(ies) or class of beneficiaries. Also list the names and addresses of the officers and directors of the Filer.		

● Yes	O No
O Yes	No
what administ	ration has
	Yes Yes What administr

License modification to relocate the Telstar 11 Ku-band satellite assigned to the 37.50 W. L. orbital location to the 37.55 W.L. orbital location

R

CERTIFICATION

The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. The applicant certifies that grant of this application would not cause the applicant to be in violation of the spectrum aggregation limit in 47 CFR Part 20. All statements made in exhibits are a material part hereof and are incorporated herein as if set out in full in this application. The undersigned, individually and for the applicant, hereby certifies that all statements made in this application and in all attached exhibits are true, complete and correct to the best of his or her knowledge and belief, and are made in good faith.

44. Applicant is a (an): (Choose the button next to applicable response	onse.)
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- O Individual
- O Unincorporated Association
- O Partnership
- Corporation
- O Governmental Entity
- Other (please specify)

45. Name of Person Signing STANLEY EDINGER
STANLEY EDINGER

46. Title of Person Signing MANAGER GOVERNMENT RELATIONS

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WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT (U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT

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THE FOREGOING NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104–13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.

PUBLIC INTEREST STATEMENT

Loral Orion, Inc., Debtor-in-Possession ("Loral Orion") requests that the Commission grant this application for modification to relocate and operate the Telstar 11 Ku-band satellite assigned to the 37.5° W.L. orbital location, to 37.55° W.L. This relocation is part of a collocation adjustment to be undertaken in conjunction with the movement of Columbia Communications Corporation's ("Columbia's) new AMC-12 C-band satellite into the 37.45° orbital position where it will replace Satcom C-1 which is also assigned and currently operating at the 37.5° W.L. orbital location. Columbia has filed a similar request for reassignment to 37.45° W.L.1 Grant of the instant application will serve the public interest by facilitating stationkeeping of Telstar 11 and AMC-12, as agreed to by Loral Orion and Columbia.

Telstar 11 and Satcom C-1 (previously Columbia 515) have been collocated in the same box at the 37.5° W.L. orbital location since November 2002. Although an adjacent "box" collocation strategy similar to the one proposed in this application would have been useful previously, Telstar 11 has been operating at full capacity until recently and any movement of the satellite would have involved re-pointing thousands of customer antennae - - a very costly endeavor. However, Telstar 11 is now in inclined orbit and there is nominal customer use of the satellite. Loral Orion has already received Commission authority to replace Telstar 11 with Telstar 11R. Columbia anticipates that the AMC-12 satellite will arrive at the 37.45° W.L. orbital location the first week of April. Columbia, and its parent company SES Americom, have requested

¹ Columbia filed a request for STA to relocate AMC-12 to 37.45° W.L. on March 16, 2005 (SAT-STA-20050316-00065).

that Loral move Telstar 11 0.05° to 37.55° prior to the arrival of AMC-12 in order to operate using an adjacent "box" collocation strategy and facilitate technical coordination. Loral Orion has agreed to do so upon the FCC's grant of the STA filed concurrently with this application.

The relocation of Telstar 11 and the operation of both satellites at the slight offset from their assigned orbital location of 37.5° W.L. will greatly simplify satellite operations for both Loral Orion and Columbia. The need for constant coordination and the possibility of collision of the spacecraft will be substantially reduced.

Moreover, this modification application is consistent with the Commission's rules and precedent. In a 1993 Order, the FCC reserved its authority "to assign orbital longitudes offset by 0.05 degrees or some multiple thereof from the nominal orbital location specified in the station authorizations." The FCC specifically noted that this authority is "particularly useful with co-located satellites of different frequency bands" and that it was codifying industry practice and the Commission's previous policies. The FCC recently simplified the rule wherein this policy was codified; however, it did not eliminate its discretion or authority to allow satellite licensees to operate from a nominal orbital location different from what was originally assigned. The new Section 25.210(j) of the Commission's rules states that:

Space stations operated in the geostationary satellite orbit must be maintained within 0.05° of their assigned orbital

² See In re Amendment of Part 25 of the Commission's Rules and Regulations to Reduce
Alien Carrier Interference Between Fixed-Satellites at Reduced Orbital Spacings and to Revise
Application Processing Procedures for Satellite Communications Services, Second Report and Order and
Further Notice of Proposed Rulemaking,, 8 FCC Rcd 1316 (1993) at para. 19.

³ ld.

⁴ Mitigation of Orbital Debris, Second Report and Order, 19 FCC Rcd 11567 (2004) at para. 43.

longitude in the east/west direction, unless specifically authorized by the Commission to operate with a different longitudinal tolerance, and except as provided in Section 25.283(b) (End-of-Life Disposal).

Thus, it remains to be the case that the FCC may grant an application for a satellite to be operated from a location that is 0.05° or greater from its originally assigned orbital location. The FCC recently approved a modification application for PanAmSat Licensee Corp. proposing a similar orbital location variation. In that case, PanAmSat sought and the FCC permitted PanAmSat to move its Galaxy 5 satellite from 125° W.L. to 125.05° W.L.5

Here, Loral Orion's modification application should be granted so that Loral Orion is able to move Telstar 11 slowly in order to conserve as much fuel as possible and be out of Columbia 's "half" of the box by the time AMC-12 arrives in the first week of April, 2005. Moreover, grant of the modification is necessary to allow the agreement between Loral Orion and Columbia to be fulfilled. The parties have agreed that an adjacent box collocation strategy, as contemplated by the FCC's 1993 Order cited above, is preferred because it offers the lowest probability of interference or collision for collocated satellites.

Finally, as demonstrated by the technical materials attached to this application, this slight shift in orbital location will not cause harmful interference to neighboring Kuband satellite operators, including Intelsat 903 located at 34.5° W.L. and NSS-806, located at 40.5° W.L.⁶ Although the proposed offset would result in Telstar 11 being

^{5 &}lt;u>See Public Notice</u>, Report No. SAT-00222, DA No. 04-1746, File No. SAT-MOD-20040405-00075 (rel. June 18, 2004).

⁶ Loral Orion is not submitting new contour maps with this application because the minor shift in orbital location will not materially affect coverage of the satellite as shown on the maps already on file.

slightly closer to NSS-806, the satellites will still be 2.95° apart and there will be no material change to the existing interference environment. The Telstar 11 satellite is fully compliant with the Commission's requirements with respect to two-degree spacing.

For the reasons discussed above, grant of this application for modification is in the public interest. Loral Orion requests that the Commission expeditiously grant this request to reassign Telstar 11 to 37.55° W.L.

Loral Orion, Inc, (Debtor-in-Possession), a U.S. corporation, is a wholly owned subsidiary of Loral Space & Communications Corporation (Debtor-in-Possession), also a U.S. corporation. Loral Space & Communications Corporation (Debtor-in-Possession) is wholly owned and controlled by Loral Space & Communications Ltd. (Debtor-in-Possession) ("Loral Ltd. DIP"), a Bermuda company. Loral Ltd. DIP's home market is the United States.

See In re Application of AT&T Corp. and Loral SpaceCom Corporation, Order and Authorization, 12 FCC Rcd. 925 at ¶ 9 (1997).

Revocation of authorizations

In an order issued April 1, 2003, the International Bureau declared null and void authorizations held by Loral SpaceCom Corporation and Loral Space & Communications Corporation to construct, launch and operate Geostationary Fixed Satellite Service Ka-band payloads at 89° W.L., 81° W.L., 47° W.L., and 78° E.L. [In re Loral SpaceCom Corporation and Loral Space & Communications Corporation, Memorandum Opinion, Order and Authorization, 18 FCC Rcd. 6301 (Int'l Bur. 2003).] The Bureau affirmed its earlier decision not to extend the construction milestones associated with these authorizations. [In re Loral Space & Communications Corporation, Order, 16 FCC Rcd. 11044 (Int'l Bur. 2001).

ENGINEERING STATEMENT

Loral Orion Inc (Loral) is currently licensed to operate Telstar 11 at 37.50° WL utilizing the 14.0-14.5 GHz uplink and 11.45-11.7 GHz, 11.7-12.2 GHz, and 12.5-12.75 GHz downlink FSS bands to provide U.S. and Europe coverage. In this filing, Loral proposes to modify its license to specify operation of Telstar 11 from 37.55° WL instead of 37.50° WL. To account for this change in orbital location, this engineering statement updates the following technical information that Loral previously had submitted: (1) gain contours, (2) PFD levels and (3) link budget analysis.

Gain Contours

The coverage patterns of Telstar 11 operating from the proposed 37.55° WL orbital location will be the same as those specified in the current license. Changing the proposed orbital location from 37.50° WL to 37.55° WL will produce no visible change in the gain contours. Accordingly, no new beam gain contours are being submitted.

Power Flux Density Levels

The power flux density ("PFD") level at the Earth's surface produced by Telstar 11 operating from the proposed 37.55° WL orbital location will be the same as those corresponding to operation from 37.50° WL and have already been provided to the FCC.

Link Budgets and Interference Analysis

The Commission has adopted a policy in which the nominal spacing between adjacent co-coverage co-frequency satellites is 2°. Moving a satellite by 0.05°, so that there is 1.95° and 2.05° of separation, respectively, between the re-located satellite and its nearest and next nearest neighbor will cause negligible change in the interference levels introduced into each satellite system. The following analysis substantiates this claim. Receiving earth stations, which have off-axis gain characteristics compliant with Section 25.209(a)(1) of the FCC rules, would have an off-axis gain of 21.5 dB toward an interfering satellite, which is 2° away from the desired satellite. If the interfering satellite is moved 0.05° toward the desired satellite, so that the separation between the desired and interfering satellites is 1.95°, the off-axis gain of the receive earth station antenna toward the interfering satellite would become 21.7 dB. Hence, there would be an increase of 0.2 dB in the interference levels from the nearest neighbor satellite. Such a small change in the interference levels would not affect in any meaningful way the existing interference environment.

Regarding the satellite that would be 2.05° away, the interference environment would also be negligibly changed. Receiving earth stations, which have off-axis gain characteristics compliant with Section 25.209(a)(1) of the FCC rules, would have an off-axis gain of 21.5 dB toward an interfering satellite, which is 2° away from the desired satellite. If the interfering satellite is moved 0.05° away from the desired satellite, so that the separation between the desired and interfering satellites is 2.05°, the off-axis gain of

the receive earth station antenna toward the interfering satellite would become 21.2 dB. Hence, there would be a decrease of 0.3 dB in the interference levels from the next nearest neighbor satellite. Such a small change in the interference levels would not affect in any meaningful way the existing interference environment. Therefore, moving Telstar 11 by 0.05° to 37.55° WL would result in an insignificant change in the interference environment for both the nearest and neighbor satellites and the Telstar 11 satellite and their associated earth stations.

In fact, the operational co-frequency satellites nearest to the 37.55° WL orbital location are New Skies Satellites NSS-806, located at 40.50° WL, and Intelsat 903, located at 34.50° WL. These satellites are 3° away from Telstar 11, making the interference environment more benign than in the case of 2° separation. In the case of NSS-806 and Telstar 11, since the satellites do not cover the same regions - NSS-806 covers the Atlantic coast of Brazil and Telstar 11 provides coverage of the US - the systems inherently introduce low interference levels into each other. With the Telstar 11 spacecraft moving 0.05° closer to NSS-806, the interference levels would increase by about 0.2 dB for earth stations adhering to the off-axis gain characteristics set forth in Section 25.209(a)(1) of the FCC Rules, since the off-axis gain toward the interfering satellite would increase from 17.1 dB (in the case of 3.00° of separation between the satellites) to 17.3 dB (in the case of 3.05° of separation between the satellites). This very small change in the interference levels, on top of the already low interference levels in the nominal case, would not impact the interference environment for NSS-806 and Telstar 11 in any meaningful way.

Regarding Intelsat 903, with earth stations adhering to the off-axis gain characteristics set forth in Section 25.209(a)(1) of the FCC Rules, the already low interference levels would be reduced by less than 0.2 dB. Such a small decrease in the off-axis gain of Intelsat 903 receive earth station will not change in any meaningful way the existing interference environment of Intelsat 903 receiving earth stations from the proposed operation of Telstar 11 at 37.55° WL. Similarly, interference from Intelsat 903 transmissions into Telstar 11 receiving earth stations would be substantially unchanged (0.2 dB variation). Given that the proposed operation of Telstar 11 would not result in any significant change to the existing interference environment as it pertains to Telstar 11, Intelsat 903, and NSS-806 no link budget analysis is provided herein¹.

Schedule S Submission

For reasons that are discussed above, the proposed operation of Telstar 11 from 37.55° WL would not result in any material changes to the operating characteristics of the satellite or the existing interference environment. The information requested in Schedule S, therefore, is duplicative of the information that Loral already has provided. Based on this fact and on discussions with the staff of the Satellite Division, Loral is not including

¹ The International Bureau recently clarified that GSO space station applicants generally are expected to provide this information. See Public Notice, DA 03-3683 (Dec. 3, 2003)

a Schedule S with its modification application. However, Loral will prepare and file a Schedule S in the event that the Satellite Division determines it to be necessary.

Certification Statement

I hereby certify that I am a technically qualified person and am familiar with Part 25 of the Commission's Rules and Regulations. The contents of this engineering statement were prepared by me or under my direct supervision and to the best of my knowledge are complete and accurate.

Peter E. Goettle

March 21, 2005