

See: SAT-MOD-20050930-60195



File # SAT-AMD-20051118-00249
with attached conditions

Call Sign S2607 Grant Date 12/21/2005
(or other identifier)

Term Dates Approved by OMB
From see conditions To: see conditions 3060-0678

Approved: [Signature] Chief Satellite
Robert C. Nelson Engineering Branch

Date & Time Filed: Nov 18 2005 8:19:46:753PM
File Number: SAT-AMD-20051118-00249

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:

Amendment to Incorporate Orbital Debris Mitigation Plan into Modification of 109 W.L. Authorization

1-8. Legal Name of Applicant

Name:	EchoStar Satellite Operating Corporation	Phone Number:	303-723-1000
DBA Name:		Fax Number:	303-723-1699
Street:	9601 South Meridian Boulevard	E-Mail:	
City:	Englewood	State:	CO
Country:	USA	Zipcode:	80112 -
Attention:	David K Moskowitz		

Attachment
Conditions of Authorization
December 21, 2005

1. Echostar Satellite Operating Corporation's (Echostar's) applications File No. SAT-MOD-20050930-00195 and SAT-AMD-20051118-00249 to modify its current authorization File No. SAT-LOA-20031211-00350, Call Sign S2607, IS GRANTED. Accordingly Echostar is authorized to launch and operate its EchoStar-109W satellite into 109.0° W.L., in the 10.95-11.2 GHz (space-to-Earth), 11.45-11.7 GHz (space-to-Earth), and 13.75-14.0 GHz (Earth-to-space) frequency bands and to operate its TT&C at 13.752 GHz (Earth-to-space), 13.998 GHz (Earth-to-space), 11.452 GHz (space-to-Earth), and 11.698 GHz (space-to-Earth), in accordance with the terms, conditions, and technical specifications set forth in its application, this attachment and the Federal Communications Commission's Rules.
2. All conditions of the Order and Authorization DA 04-3163 with the exception of the condition in paragraph 33 otherwise remain in effect.¹
3. Echostar is afforded thirty days from the date of release of this grant and authorization to decline this authorization as conditioned. Failure to respond within this period will constitute formal acceptance of the authorization as conditioned.
4. This grant 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 public notice indicating that this action was taken.

¹ See *In the Matter of EchoStar Satellite LLC Application for Authority to Construct, Launch and Operate a Geostationary Satellite Using the Extended Ku-band Frequencies in the Fixed-Satellite Service at the 109° W.L. Orbital Location*, Order and Authorization, DA 04-3163 (rel. Sept. 30, 2004), ¶ 33 (requiring EchoStar to "submit to the Commission a modification to this authorization, specifying the exact frequencies for tracking, telemetry and command (TT&C) functions for EchoStar-109W satellite, on, or prior to, the date of its first construction milestone, i.e. 9/30/05.").

9-16. Name of Contact Representative

Name:	Pantelis Michalopoulos	Phone Number:	202-429-6494
Company:	Steptoe & Johnson LLP	Fax Number:	202-429-3902
Street:	1330 Connecticut Avenue, NW	E-Mail:	pmichalo@steptoe.com
City:	Washington	State:	DC
Country:	USA	Zipcode:	20036-1795
Attention:		Relationship:	Legal Counsel

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.

- a1. 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
- (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
- (N/A) b10. Other (Please specify)

17c. Is a fee submitted with this application?

- If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114).
- Governmental Entity Noncommercial educational licensee
- Other (please explain): This amendment is made pursuant to the FCC's new orbital debris mitigation rules and does not require a fee per the FCC's Public Notice (DA 05-2698).

17d.

Fee Classification CWY – Space Station Amendment (Geostationary)

18. If this filing is in reference to an existing station, enter:

(a) Call sign of station:
S2607

19. If this filing is an amendment to a pending application enter both fields, if this filing is a modification please enter only the file number:

(a) Date pending application was filed:

09/30/2005

(b) File number:

SATMOD2005093000195

TYPE OF SERVICE

20. NATURE OF SERVICE: This filing is for an authorization to provide 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 only one.

- Common Carrier Non-Common Carrier

22. If earth station applicant, check all that apply.

- Using U.S. licensed satellites
 Using Non-U.S. licensed satellites

23. If applicant is providing INTERNATIONAL COMMON CARRIER service, see instructions regarding Sec. 214 filings. Choose one. Are these facilities:

- Connected to a Public Switched Network 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: 10950

Frequency Upper: 14000

(Please specify additional frequencies in an attachment)

TYPE OF STATION

25. CLASS OF STATION: Choose the button next to the class of station that applies. Choose only one.

- a. Fixed Earth Station
- b. Temporary-Fixed Earth Station
- c. 12/14 GHz VSAT Network
- d. Mobile Earth Station
- e. Geostationary Space Station
- f. Non-Geostationary Space Station
- g. Other (please specify)

26. TYPE OF EARTH STATION FACILITY:

- Transmit/Receive Transmit-Only Receive-Only N/A

"For Space Station applications, select 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 & countries)
- j — authorization to change Points of Communication (satellites & countries)
- k — authorization for facilities for which environmental assessment and radiation hazard reporting is required
- l — 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. Yes 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?	<input type="radio"/> Yes <input checked="" type="radio"/> No
30. Is the applicant an alien or the representative of an alien?	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> N/A
31. Is the applicant a corporation organized under the laws of any foreign government?	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> 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?	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> 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 No 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.

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.

Yes 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 construction permit denied by the Commission? If Yes, attach as an exhibit, an explanation of circumstances.

Yes No

Question 36

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 explanation 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

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 exhibit, an explanation of the circumstances.

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. Q40

41. By checking Yes, the undersigned certifies, that neither applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of "party to the application"; for these purposes.

Yes No

42a. Does the applicant intend to use a non-U.S. licensed satellite to provide service in the United States? If Yes, answer 42b and attach an exhibit providing the information specified in 47 C.F.R. 25.137, as appropriate. If No, proceed to question 43.

Yes No

42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued, what administration has coordinated or is in the process of coordinating the space station?

43. Description. (Summarize the nature of the application and the services to be provided). (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

EchoStar Satellite Operating Corporation amends its Application for Modification of its 109 W.L. authorization to include an updated orbital debris mitigation plan pursuant to the Commission's Public Notice of October 13, 2005. All other information contained in the Modification remains materially unchanged.

ODM

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.)

- Individual
- Unincorporated Association
- Partnership
- Corporation
- Governmental Entity
- Other (please specify)

45. Name of Person Signing
David K. Moskowitz

46. Title of Person Signing
Executive Vice President and General Counsel

—>

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

The public reporting for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the required data, and completing and reviewing the collection of information. If you have any comments on this burden estimate, or how we can improve the collection and reduce the burden it causes you, please write to the Federal Communications Commission, AMD-PERM, Paperwork Reduction Project (3060-0678), Washington, DC 20554. We will also accept your comments regarding the Paperwork Reduction Act aspects of this collection via the Internet if you send them to jboley@fcc.gov. PLEASE DO NOT SEND COMPLETED FORMS TO THIS ADDRESS.

Remember – You are not required to respond to a collection of information sponsored by the Federal government, and the government may not conduct or sponsor this collection, unless it displays a currently valid OMB control number or if we fail to provide you with this notice. This collection has been assigned an OMB control number of 3060-0678.

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.

**Orbital Debris Mitigation Plan for the EchoStar Satellite
Licensed to be Located at 109° W.L.**

EchoStar Satellite Operating Corporation ("EchoStar") has filed a request for modification of its authorization to operate a satellite at 109° W.L. ("EchoStar Satellite").¹ Pursuant to Section 25.114(d)(14) of the Commission's rules,² the Commission's Second Report and Order in IB Docket No. 02-54,³ the Commission's Public Notice published on October 13, 2005, and the e-mail sent to Mr. Pantelis Michalopoulos by Ms. CurTisha Banks of the Commission on November 8, 2005, EchoStar requests that the Commission incorporate this orbital debris mitigation plan into EchoStar's pending modification request.

EchoStar has not yet completed the design for the EchoStar Satellite. EchoStar has a contract in place for the construction of the satellite. Under its license and the contract, the design of the satellite is due to be completed by the Critical Design Review ("CDR") milestone of September 30, 2006. Specifically, the Statement of Work associated with the satellite manufacturing contract includes provisions to review orbital debris mitigation as part of preliminary design review ("PDR") and CDR, including a formal Failure Modes and Effects Criticality Analysis ("FMECA"). The information herein, therefore, is based on statements and assurances from the satellite manufacturer.

I. SPACECRAFT HARDWARE DESIGN

EchoStar can confirm that the satellite will not undergo any planned release of debris during its operation. Furthermore, all separation and deployment mechanisms, and any other potential source of debris will be retained by the spacecraft or launch vehicle.

In conjunction with Space Systems/Loral, EchoStar has assessed and limited the probability of the satellite becoming a source of debris by collisions with small debris or meteoroids of less than one centimeter in diameter that could cause loss of control and prevent post-mission disposal. EchoStar has taken steps to limit the effects of such collisions through shielding, the placement of components, and the use of redundant systems.

The EchoStar Satellite will include separate TT&C and propulsion subsystems that are necessary for end-of-life disposal. The spacecraft TT&C system, vital for orbit raising, will be extremely rugged with regard to meteoroids smaller than 1 cm, by virtue of its redundancy, shielding, separation of components and physical characteristics. Omni-directional antennas are mounted on opposite sides of the spacecraft. These antennas, each providing

¹EchoStar Satellite Operating Corp., Application for Modification of License to Select TT&C Frequencies for its Ka-band GSO Satellite at 109° W.L., File No. SAT-MOD-20050930-00195 (filed Sept. 30, 2005).

² 25 C.F.R. §25.114(d)(14).

³ *Mitigation of Orbital Debris*, Second Report and Order, 19 FCC Rcd 11567 (2004) ("Second Report and Order").

greater than hemispherical coverage patterns, are extremely rugged and capable of providing adequate coverage even if struck, bent or otherwise damaged by a small or medium sized particle. Either omni-directional antenna, for either command or telemetry, will be sufficient to enable orbit raising. The command receivers and decoders and telemetry encoders and transmitters will be located within a shielded area and will be totally redundant and physically separated. A single rugged thruster and shielded propellant tank provide the energy for orbit raising. Otherwise, there are no single points of failure in the system.

EchoStar will continue to review these aspects of on-orbit operations with the spacecraft manufacturer and will make such adjustments and improvements as appropriate to assure that its spacecraft will not become sources of debris during operations or become derelicts in space due to a collision with a small or large object.

II. MINIMIZING ACCIDENTAL EXPLOSIONS

In conjunction with Space Systems/Loral, EchoStar has assessed and will limit the probability of accidental explosions during and after completion of mission operations. The satellite manufacturer has taken steps to ensure that debris generation will not result from the conversion of energy sources on board the satellite into energy that fragments the satellite. In particular, the satellite manufacturer advises that burst tests are performed on all pressure vessels during qualification testing to demonstrate a margin of safety against burst. Bipropellant mixing is prevented by the use of valves that prevent backwards flow in propellant lines and pressurization lines. Pyrotechnics are nominally used in the mission only as part of the initial deployment process. After orbit raising to the disposal orbit, all unfired pyrotechnics will be fired as part of the final satellite decommission. All batteries and fuel tanks are monitored for pressure and temperature. Excessive battery charging or discharging is limited by a monitoring and control system which will automatically limit the possibility of fragmentation. Corrective action, if not automatically undertaken, will be immediately undertaken by the spacecraft operator to avoid destruction and fragmentation. Thruster temperatures, impulse and thrust duration are carefully monitored, and any thruster may be turned off via redundant valves. Consequently, there is no possibility of explosion during the operating mission. Space Systems/Loral also will conduct a FMECA as part of the design process.

At the end of the satellite's life, all traveling wave tube amplifier ("TWTAs") will be outgassed, and all residual fuel will be consumed. All fuel latch valves will be placed in an "open" position, and any pressurized system will be vented. Spacecraft battery trickle charge and all automatic battery charging sequences will be disabled.

III. SAFE FLIGHT PROFILES

EchoStar has reviewed the lists of FCC licensed satellite networks, as well as those that are currently under consideration by the FCC. In addition, non-USA networks for which a request for coordination has been submitted to the ITU in the vicinity of 109° W.L., have also been reviewed. For purposes of calculating potential station-keeping volume overlap, U.S. satellites have been assumed to have a maximum east-west excursion of $\pm 0.05^\circ$ from their nominal location, while non-U.S. satellite networks have been assumed to have a maximum excursion of $\pm 0.1^\circ$ from their nominal location.

Based on this review, there are no existing FCC licenses for any satellite network in the immediate vicinity of 109° W.L that could physically collide with the EchoStar Satellite. The nearest U.S. licensed satellite is WildBlue-1 that is scheduled to be launched in December 2006 to the 109.2° W.L. orbital position. However, the station-keeping volume of the WildBlue-1 satellite will not overlap that of the EchoStar Satellite, and therefore no physical collision between them is possible.

Once the launch vehicle manufacturer is selected and a launch plan, launch vehicle and launch scenario are developed, EchoStar will engage in physical coordination with any satellite operator that has launched, or will launch, a satellite near 109° W.L. EchoStar also will select one of the established launch agencies with a proven record of safe flight planning, taking care to minimize the possibilities of any collision. The launch contractor will be responsible for collision avoidance maneuvers and launch analysis of in-flight profile planning. Prior to launch of the EchoStar Satellite, EchoStar will continue to monitor LyngSat and the ITU resources to identify satellites that reasonably can be expected to operate at 109° W.L. +/- 0.2°.

IV. POST-MISSION DISPOSAL

Upon mission completion, EchoStar will maneuver the EchoStar Satellite to a disposal orbit with a minimum perigee of 350 km above the normal GSO operational orbit. This proposed disposal orbit altitude is well above the IADC formula, as required in 47 C.F.R. §25.283 and the Commission's Second Report and Order:⁴

- Solar array area = 74.6 m²
- Satellite body area (oriented for max antenna exposure) = 5.2 m²
- Ku-band antenna area = 18 m²
- Total Solar Pressure Area "A" = 97.8 m²

- Area-to-mass ratio ("A/m") = 0.0392 m²/kg
- Solar Pressure Radiation Coefficient (worst case) ("C_R") = 2

Therefore the Minimum Disposal Orbit Perigee Altitude will be equal to

$$\begin{aligned} &= 36,021 \text{ km} + 1000 \times C_R \times A/M \\ &= 36,021 \text{ km} + 1000 \times 2 \times 0.0392 \text{ m}^2/\text{kg} \\ &= 36,099.4 \text{ km} \\ &= 313 \text{ km above GSO} \end{aligned}$$

Approximately 10 kg of propellant will be allocated and reserved for the final orbit raising maneuvers. EchoStar used two methods to calculate this amount. First, it applied the pressure-volume-temperature method, which uses the tank pressure and temperature information to determine remaining propellant. Second, it applied the bookkeeping method, which evaluates the flow rate at average pressure and total thruster on-time of orbital maneuvers to determine the amount of propellant used. EchoStar has assessed fuel gauging uncertainty and has provided an adequate margin of fuel to address such uncertainty.

⁴ Second Report and Order at ¶ 68.

Response to Question 36

In a Memorandum Opinion and Order released May 16, 2002, the Satellite Division of the International Bureau cancelled two conditional construction permits held by EchoStar affiliates for 22 channels at the 175° W.L. orbital location. *See In the Matter of EchoStar Satellite Corporation, Directsat Corporation, Direct Broadcasting Satellite Corporation, Consolidated Request for Additional Time to Commence Operation*, Memorandum Opinion and Order, DA 02-1164 (rel. May 16, 2002).

By Order released July 1, 2002, the International Bureau cancelled EchoStar's license for a Ka-band satellite system and dismissed a related modification application filed by EchoStar. *See In the Matter of EchoStar Satellite Corporation; Application for Authority to Construct, Launch, and Operate a Ka-band Satellite System in the Fixed-Satellite Service*, Memorandum Opinion and Order, DA 02-1534 (rel. July 1, 2002). On November 8, 2002, the International Bureau reinstated EchoStar's license for a Ka-band system as well as the related modification application. *See In the Matter of EchoStar Satellite Corporation; Application for Authority to Construct, Launch, and Operate a Ka-band Satellite System in the Fixed-Satellite Service*, Memorandum Opinion and Order, DA 02-3085 (rel. Nov. 8, 2002).

In a Memorandum Opinion and Order released April 29, 2004, the International Bureau denied, in part, four applications filed by EchoStar to operate GSO FSS satellites using the Ka and/or Extended Ku-bands at the 83° W.L., 105° W.L, 113° W.L, and 121° W.L orbital locations. *See In the Matter of EchoStar Satellite LLC, Applications for Authority to Construct, Launch, and Operate Geostationary Satellites in the Fixed-Satellite Service Using the Ka and/or Extended Ku Bands at the 83° W.L., 105° W.L, 113° W.L, and 121° W.L Orbital Locations*, Memorandum Opinion and Order, DA 04-1167 (rel. Apr. 29, 2004). EchoStar has petitioned for reconsideration of this decision.

In a Memorandum Opinion and Order released August 3, 2004, the International Bureau declared null and void the space station authorization held by VisionStar, an EchoStar affiliate, for use of the Ka-band at the 113° W.L. orbital location. *See VisionStar, Inc., Application for Modification of Authority to Construct, Launch and Operate a Ka-Band Satellite System in the Fixed Satellite Service*, Memorandum Opinion and Order, DA 04-2449 (rel. Aug. 3, 2004).

By letter dated May 19, 2005, the International Bureau denied EchoStar's applications for a Fleet Management Modification and for a Special Temporary Authority to move the EchoStar 4 satellite to 61.5° W.L., pending the Commission's consideration of another EchoStar request to move the satellite to 77° W.L., on the grounds that the purpose of the proposed fleet management modification was not consistent with the purposes of the Commission's rules and that there were no extraordinary circumstances for the grant of temporary authority. *See* Letter from Thomas S. Tycz, Chief, Satellite Division, International Bureau, FCC to Pantelis Michalopoulos, Counsel to EchoStar Satellite L.L.C., DA 05-1405 (May 19, 2005).

In a Memorandum Opinion and Order released June 3, 2005, the International Bureau denied EchoStar's application for a Special Temporary Authority to move the EchoStar 4 satellite to 77° W.L. on the grounds that EchoStar had failed to establish extraordinary circumstances for the grant of such authority. *See EchoStar Satellite L.L.C., Application for Special Temporary Authority to Conduct Telemetry, Tracking and Command Operations During the Relocation of EchoStar 4 to the 77° W.L. Orbital Location*, Memorandum Opinion and Order, DA 05-1581 (rel. Jun. 3, 2005). However, the International Bureau later granted partial reconsideration of this order and the applications related to moving the EchoStar 4 satellite to

77° W.L. are currently pending before the Commission. *See EchoStar Satellite L.L.C., Application for Special Temporary Authority to Conduct Telemetry, Tracking and Command Operations During the Relocation of EchoStar 4 to the 77° W.L. Orbital Location, Application for Modification of Direct Broadcast Satellite Authorization To Permit Long-Term Cessation of Operations at the 157° W.L. Orbital Location, Application for Modification of Earth Station Authorization to add the EchoStar 4 Satellite at 77° W.L. as a Point of Communication, Order on Reconsideration, DA 05-2067 (rel. Jul. 25, 2005).*

RESPONSE TO QUESTION 40

OWNERSHIP AND CORPORATE
OFFICERS AND DIRECTORS

OWNERSHIP

EchoStar Satellite Operating Corporation is an indirect, wholly-owned subsidiary of EchoStar Communications Corporation (a Nevada corporation). The stockholders owning of record and/or voting 10 percent or more of the voting stock of EchoStar Communications Corporation include:

<u>Ownership Interest</u>	<u>Citizenship</u>	<u>Approx. Equity Interest¹</u>	<u>Approx. Voting Interest¹</u>
Charles W. Ergen ² Chairman and CEO EchoStar Communications Corporation 9601 South Meridian Blvd. Englewood, CO 80112	USA	60.0%	72.7%
David K. Moskowitz Executive Vice President and General Counsel 9601 South Meridian Blvd. Englewood, CO 80112	USA	*% ³	19.3% ⁴
Fidelity Management and Research Corporation 82 Devonshire Street Boston, MA 02109	USA (Massachusetts corporation)	15.2%	1.5%

¹ As of November 11, 2005.

² Includes both Class A common and Class B common stock ownership. Class B common stock is owned through several trusts.

³ Less than 1%.

⁴ Includes Class B Common Stock for which Mr. Moskowitz has voting power solely by virtue of his position as a trustee of several Ergen trusts.

CORPORATE OFFICERS AND DIRECTORS⁵

EchoStar Communications Corporation

Executive Officers:

Charles W. Ergen	Chief Executive Officer
James DeFranco	Executive Vice President
Carl E. Vogel	Vice Chairman
Michael A. Neuman	President and Chief Operating Officer
David K. Moskowitz	Executive Vice President, General Counsel and Secretary
Steven B. Schaver	President, EchoStar International Corporation
David J. Rayner	Executive Vice President and Chief Financial Officer
Mark W. Jackson	President, EchoStar Technologies Corporation
O. Nolan Daines	Executive Vice President, Broadband
Michael Kelly	Executive Vice President, DISH Network Service L.L.C. and Customer Service Operations

Board of Directors:

Charles W. Ergen	Chairman
Carl Vogel	
Steven R. Goodbarn	
James DeFranco	
David K. Moskowitz	
Cantey M. Ergen	
C. Michael Schroeder	
Michael T. Dugan	
Tom A. Ortolf	
Gary Howard	

EchoStar Satellite Operating Corporation

Executive Officers:

Charles W. Ergen	President and Chief Executive Officer
James DeFranco	Executive Vice President
David K. Moskowitz	Executive Vice President, General Counsel, Corporate Secretary

Board of Directors:

Charles W. Ergen	Chairman
James DeFranco	
David K. Moskowitz	

⁵ The address for all officers and directors of EchoStar Communications Corporation and EchoStar Satellite Operating Corporation is 9601 South Meridian Blvd., Englewood, CO 80112.