

In-Orbit Spare, TT&C, + Testing at 61.65° W L

S2232 SAT-STA-20100203-00020 IB2010000477
EchoStar Corporation
EchoStar 6

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Callsign:



File # SAT-STA-2010 0203-00020
Call Sign S2232 Grant Date 03/03/10
(or other identifier)
Term Dates Period of
From 02/15/10 To: 60 days

Approved by OMB
3060-0678

Approved: *Stephen J. Duall*
Stephen J. Duall
Chief, Satellite Policy Branch

FEDERAL COMMUNICATIONS COMMISSION
APPLICATION FOR SPACE STATION SPECIAL TEMPORARY AUTHORITY
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APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:
Special Temporary Authority to Relocate EchoStar 6 to 61.65 W.L. and Operate It as an In-Orbit Spare

1. Applicant

Name: EchoStar Corporation Phone Number: 303-723-1000
DBA Name: Fax Number:
Street: 100 Inverness Terrace East E-Mail:
City: Englewood State: CO
Country: USA Zipcode: 80112 -
Attention: Linda Kinney - (202)293-0981

**Attachment to Grant
EchoStar Corporation
IBFS File No. SAT-STA-20100203-00020**

The request of EchoStar Corporation (EchoStar), IBFS File No. SAT-STA-20100203-00020, to operate the EchoStar 6 space station (Call Sign S2232) temporarily as an in-orbit spare at the 61.65° W.L. orbital location is GRANTED. Accordingly, EchoStar is authorized, for a period of 60 days, commencing on February 15, 2010, to conduct Telemetry, Tracking, and Telecommand (TT&C) operations necessary to operate EchoStar 6 temporarily as an in-orbit spare at the 61.65° W.L. orbital location.¹ EchoStar is authorized to use the 17,305 MHz frequency for telecommand and the 12,203 and 12,204 MHz frequencies for telemetry during these operations. This authorization shall be in accordance with the technical specifications set forth in EchoStar's application and the Commission's rules, and is subject to the following conditions:

1. EchoStar's operations at the 61.65° W.L. orbital location shall be on a non-harmful interference basis, *i.e.*, EchoStar shall not cause harmful interference to, and shall not claim protection from interference caused to it, by any other lawfully operating radiocommunication system.
2. In the event of any harmful interference during EchoStar's operations at the 61.65° W.L. orbital location, EchoStar shall cease operations immediately upon notification of such interference, and shall immediately inform the Commission, in writing, of such an event
3. EchoStar may activate the communications payload of the EchoStar 6 space station in the event of a service outage of the EchoStar 3 (Call Sign S2653) or the EchoStar 12 (Call Sign S2741) space stations.
4. In the event EchoStar activates the communications payload of the EchoStar 6 space station pursuant to condition 3 above, EchoStar must notify the Commission, in writing, of such activation within three business days of activation.
5. EchoStar may conduct testing of the communications payload of the EchoStar 6 space station at the 61.65° W.L. orbital location. EchoStar shall notify the Commission, in writing, within three business days after the conclusion of testing of the payload.
6. While at the 61.65° W.L. orbital location, EchoStar shall maintain the EchoStar 6 spacecraft with an east/west longitudinal station-keeping tolerance of +/- 0.05 degrees.
7. Any operations over Channels 23 and 24 at the 61.65° W.L. orbital location are subject to temporarily-waived customer notification and programming restrictions imposed on operations over Channels 23 and 24 at the 61.5° W.L. orbital location. *See* IBFS File No. SAT-STA-20090821-00092 (granted, with conditions, Dec. 1, 2009). Upon launch and operation of a replacement satellite for EchoStar 3 at the 61.5° W.L. orbital location, the customer notification

¹ The STA was previously granted, in part, and deferred, in part, on February 12, 2010. That action granted EchoStar the authority to conduct TT&C operations necessary to drift the space station from the 72.7° WL orbital location to the 61.55° WL orbital location and maintain the satellite at the new location.

**Attachment to Grant
EchoStar Corporation
IBFS File No. SAT-STA-20100203-00020**

and programming conditions will apply. See EchoStar Satellite Operating Corp., *Order and Authorization*, 22 FCC Rcd 2223, 2226 at para. 14 (Int'l Bur. 2007).

8. Any action taken or expense incurred as a result of operations pursuant to this special temporary authority is solely at EchoStar's own risk.

9. Grant of this authorization is without prejudice to any determination that the Commission may make regarding EchoStar's pending application seeking a license to maintain EchoStar 6 at 61.65° W.L. as an in-orbit spare (IBFS File No. SAT-A/O-20100203-00119).

10. This action is issued pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. § 0.261, and is effective immediately. 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.

In-Orbit Spare, TT&C, Testing at 61.65° W.L.



*subject to conditions

File # SAT-STA-20100203-00020

Call Sign S2232 Grant Date 03/03/10
(or other identifier)

Term Dates period of
From 02/15/10 To: 60 days

Approved: Stephen J. Duall

Stephen J. Duall
Chief, Satellite Policy Branch

2. Contact	
Name: Pantelis Michalopoulos	Phone Number: (202)429-6494
Company: Steptoe & Johnson LLP	Fax Number:
Street: 1330 Connecticut Ave., NW	E-Mail: pmichalopoulos@steptoe.com
City: Washington	State: DC
Country: USA	Zipcode: 20036 -
Attention:	Relationship:
(If your application is related to an application filed with the Commission, enter either the file number or the IB Submission ID of the related application. Please enter only one.)	
3. Reference File Number or Submission ID	
4a. Is a fee submitted with this application?	
<input checked="" type="radio"/> If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114).	
<input type="radio"/> Governmental Entity <input type="radio"/> Noncommercial educational licensee	
<input type="radio"/> Other (please explain):	
4b. Fee Classification	
5. Type Request	
<input checked="" type="radio"/> Change Station Location	<input type="radio"/> Extend Expiration Date <input type="radio"/> Other
6. Temporary Orbit Location 61.65 W.L.	
7. Requested Extended Expiration Date	

8. Description (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 Corporation seeks Special Temporary Authority to relocate EchoStar 6 to 61.65 W. L., and to operate it as an in-orbit spare. See attached narrative.

9. 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

10. Name of Person Signing
Linda Kinney

11. Title of Person Signing
Vice President, Law and Regulation

12. Please supply any need attachments.

Attachment 1: Narrative

Attachment 2:

Attachment 3:

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).

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**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of))) ECHOSTAR CORPORATION)) Application for Special Temporary Authority) To Move EchoStar 6 to, and Operate it as an) In-Orbit Spare at 61.65° W.L.)	File No. SAT-STA-2010_____
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APPLICATION FOR SPECIAL TEMPORARY AUTHORITY¹

By this Application, EchoStar Corporation (“EchoStar”) requests special temporary authority (“STA”) for 60 days (a) to move the EchoStar 6 satellite from its current orbital position at 72.7° W.L., where it is operating under Canadian authority, to the 61.65° W.L. orbital location; and (b) to operate the satellite at 61.65° W.L. This temporary move is necessitated by the recent loss of additional transponder capacity on EchoStar 3. In light of the timing exigencies posed by this further, and unforeseen, loss, EchoStar requests action by no later than February 15, 2010.

EchoStar is currently operating two Direct Broadcast Satellite (“DBS”) service satellites at the nominal 61.5° W.L. orbital location – EchoStar 3 and EchoStar 12 (formerly Rainbow 1). As the Commission is aware, EchoStar 3 has experienced several transponder failures due to Traveling Wave Tube Amplifier (“TWTA”) anomalies, and has been operating at reduced

¹ Concurrent with this application, EchoStar is filing (1) an application to operate the satellite as an in-orbit spare and to activate the communications payload as needed; (2) STA applications to operate five transmit/receive earth stations to provide TT&C service to EchoStar 6 during its relocation to 61.65° W.L. (“Relocation STAs”); and (3) STA applications to operate three transmit/receive earth stations to provide TT&C and feeder link communications for EchoStar 6 once it is located at 61.65° W.L. (“On-Station STAs”).

capacity.² On January 7, 2010, EchoStar 3 experienced another TWTA anomaly further diminishing its operating capacity. As a result of this failure, EchoStar will not be able to maintain the current level of service provided from 61.5° W.L. unless it relocates at least one additional satellite to the orbital location. EchoStar, therefore, requests authority to temporarily relocate EchoStar 6 to 61.65° W.L. where it will be maintained as an in-orbit spare and will supplement, as needed, the service provided by EchoStar 3 and EchoStar 12 to maintain regular programming.

The proposed redeployment will ensure that EchoStar's customer, DISH Network Corporation, will be able to continue providing high-quality DBS service to consumers without any service interruptions until EchoStar's EchoStar 15 satellite begins operating at 61.5° W.L.³ EchoStar 15, a 32-transponder-capable DBS satellite, is expected to effectively replace EchoStar 3 and will be ready for launch by the fourth quarter of 2010.⁴ Upon launch and successful testing of EchoStar 15, EchoStar currently expects to return EchoStar 6 to its current home – 72.7° W.L. EchoStar has been advised by its partner, Telesat Canada, which has the license for that Canadian orbital location, that the move from, and return to, 72.7° W.L. is not likely to cause regulatory concern on the part of Industry Canada. In any event, any redeployment of

² See EchoStar 3 Status Report, File No. SAT-STA-20090821-00092 (filed Dec. 30, 2009) (“EchoStar 3 Status Report”); *EchoStar Satellite Operating Corporation, Application for Extension and Modification of Special Temporary Authority to Operate Direct Broadcast Satellite Service over Channels 23 and 24 at the 61.5° W.L. Orbital Location*, Order and Authorization, 22 FCC Rcd. 2223, at ¶¶ 4-6 (2007).

³ EchoStar has previously informed the Commission that it has initiated construction of the satellite at EchoStar's own risk, and intends to file an application seeking authority to launch and operate the satellite in the immediate future.

⁴ See EchoStar 3 Status Report.

EchoStar 6 will take place after securing all necessary authority, and EchoStar will advise the Commission of any change in its plans.

For the reasons set forth herein, grant of this Application will not cause harmful interference to any authorized user of the spectrum and will serve the public interest.

I. GRANT OF THIS APPLICATION IS IN THE PUBLIC INTEREST

EchoStar and its predecessors have been providing consumer DBS service from the 61.5° W.L. orbital location since 1998. The STA requested in this application is in the public interest because it will ensure continuity of national programming for consumers in the event of a service outage until EchoStar 15 is brought into service later this year. Nor will this move entail a service interruption at 72.7° W.L., since Nimiq 5 will continue to provide service from that orbital slot.⁵

The relocation of EchoStar 6 to 61.65° W.L. and its operation as an in-orbit spare will not cause harmful interference to any other U.S.-licensed satellite operator. To the east, there are no operational BSS satellites serving the United States within 9 degrees of 61.65° W.L., other than EchoStar's own EchoStar 12 satellite.⁶ To the west, the closest operational BSS satellite serving the United States is the DIRECTV 1R satellite, which is operating at 72.5° W.L. under Canadian authority. The DIRECTV satellite would be more than 10 degrees away from the proposed

⁵ See File No. SES-LFS-20080512-00595 (granted July 28, 2008); see also File No. SAT-MOD-20070912-00124 (filed Sept. 12, 2007). In 2007, XM Radio Inc. requested similar authority to operate two satellites as in-orbit spares at the 85° W.L. orbital slot and authority to activate the satellites' communications payload in the event of a service outage on either of its two operating satellites.⁵ The Commission granted this request subject to a notification condition. That condition is not necessary here – the DBS industry, and DISH in particular, has a long history of activating spares without incident.

⁶ Concurrent with this application, EchoStar is filing an application requesting STA to move EchoStar 12 to 61.35° W.L. to accommodate EchoStar 6.

orbital location for EchoStar 6 and, therefore, would not experience additional interference as a result of the proposed operations.

Finally, the proposed temporary operation of the EchoStar 6 satellite at 61.65° W.L. will not create any risk of in-orbit collision. EchoStar 6 will be maintained within +/- 0.05° east/west station-keeping, which will ensure that its station-keeping volume will not overlap with EchoStar's own satellites at 61.5° W.L. EchoStar will coordinate all drift orbit operations with other potentially affected in-orbit operators.

II. THE PROPOSED RELOCATION IS CONTEMPLATED IN THE U.S.-CANADA LETTER EXCHANGE

EchoStar 6 is operating at the 72.7 ° W.L. orbital location, which has been allotted to Canada under the International Telecommunication Union's Region 2 Plan for the Broadcasting-Satellite Service ("BSS"). The eventuality of moving EchoStar 6 from 72.7° W.L. has been already contemplated with specificity in the letters exchanged between the U.S. and Canadian administrations when EchoStar 6 was originally moved to 72.7° W.L.⁷ These letters provide a clear roadmap and confirm that Commission action on the relocation of the satellite is not contingent on any prior Canadian action. The U.S. letter states: "Operation of the EchoStar 6 satellite at any location other than at the 72.7 W.L. orbital location will be subject to licensing by the FCC, including any operations as a result of equipment failure in the satellite that results in the inability to maintain the satellite within +/- 0.1 degrees of its assigned position at the 72.7 W.L. orbital location."⁸

The U.S. letter further states:

⁷ Stamp Grant, SAT-STA-20080512-00103, Annex A to Conditions of Grant (granted July 2, 2008) ("Exchange of Letters").

⁸ *Id.* at 2.

In the event of the exercise by EchoStar of its contractual rights to move the EchoStar 6 satellite, and in the event that there are any provisions in Telesat's license from Industry Canada, or any provisions in the Canadian laws and regulations governing the telecommunications operations of Telesat that would preclude or otherwise limit the exercise of EchoStar's contractual rights within the time frames specified in the EchoStar/Telesat/Express Vu agreement, the FCC would appreciate the opportunity to consult with Industry Canada, prior to any exercise of such licensing authority, or application of such law or regulation by Industry Canada. I would appreciate acknowledgement of these views and expression of any view which Industry Canada may have concerning the matter discussed in this paragraph. Let me also express the FCC's willingness to discuss this matter further, in the event, at a later date, it becomes necessary to do so.⁹

The Canadian letter, in turn, acknowledges these provisions and also states with respect to actions under Canadian law: "To the extent possible under the circumstances and the law, Industry Canada will inform the FCC of the exercise of licensing authority, or the application of law or regulation by Industry Canada, that would preclude or otherwise limit the exercise of EchoStar's contractual rights within the time frames specified in the agreement."¹⁰

EchoStar currently plans to return the satellite to 72.7° W.L. The existing letter exchange is more than adequate to cover the possibility of such a return, and there is no need for the Commission and Industry Canada to exchange letters anew at that time. If, however, either the Commission or Industry Canada disagree, any new letter can be the same in substance as the ones already in place.

III. USE OF THE 14 GHz BAND

EchoStar respectfully requests temporary authority for the use of one narrow 14 GHz beacon (14002.5 MHz, specifically) for TT&C operations during EchoStar 6's relocation to 61.65° W.L. To the extent necessary, EchoStar is also requesting a waiver of the Commission's

⁹ *Id.* at 3.

¹⁰ *Id.* at 4.

rules requiring satellites to conduct TT&C within their allocated bands.¹¹ The Commission has previously granted a similar waiver to allow use of the 14 GHz band for transfer orbit TT&C operations in connection with this satellite.¹²

There is good cause for the requested waiver: it will solve a problem without creating one. The proposed use of the 14 GHz band will ensure that there is no interference to DIRECTV 1R at 72.5° W.L. as the EchoStar 6 satellite moves away from 72.7° W.L. Both EchoStar 6 and DIRECTV 1R were designed (*i.e.* “hard-wired”) to receive telecommand communications on exactly the same 17 GHz frequency. Moreover, neither satellite is equipped to receive telecommand communications on any other frequency in the 17 GHz band. It is this intractable coincidence that necessitates the use of the 14,002.5 MHz telecommand beacon on the EchoStar 6 satellite during relocation. Once EchoStar 6 reaches 61.65° W.L., TT&C operations will be provided in the 17 GHz band.¹³

Moreover, the proposed use of the 14 GHz band for TT&C operations during relocation will not cause any harmful interference to any adjacent satellite networks. EchoStar will use the 14 GHz frequency on the same coordinated, non-interference and non-protected basis as it did during its relocation to 72.7° W.L. and pursuant to the conditions outlined below.¹⁴

¹¹ Ordinarily, U.S. domestic satellites must conduct TT&C functions at the edges of the allocated service bands. *See* 47 C.F.R. § 25.202(g). The Commission may waive this requirement for good cause shown. *See* 47 C.F.R. § 1.3.

¹² *See* File No. SES-STA-20080512-00606 (Call Sign E070015) (granted Jul. 9, 2008).

¹³ *See* On-Station STAs.

¹⁴ *See* File No. SES-STA-20080512-00606 (Call Sign E070015) (granted Jul. 9, 2008).

IV. WAIVER PURSUANT TO SECTION 304 OF THE ACT

In accordance with Section 304 of the Communications Act of 1934, as amended, 47 U.S.C. § 304, EchoStar hereby 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.

V. CONCLUSION

For the foregoing reasons, EchoStar respectfully requests the grant of its application for special temporary authority for 60 days to relocate EchoStar 6 to 61.65° W.L. and operate it as an in-orbit spare at that location.

During the relocation, all transponders other than the TT&C transponders will be switched off, and EchoStar will operate the satellite subject to the following conditions:

- a) EchoStar shall coordinate all drift orbit operations with other potentially affected in-orbit operators.
- b) During relocation of the EchoStar 6 satellite, operations shall be on a non-harmful interference basis, meaning that EchoStar shall not cause interference to, and shall not claim protection from interference caused to it by any other lawfully operating satellites.
- c) In the event that any harmful interference is caused as a result of operations during the relocation of the EchoStar 6 satellite, EchoStar shall cease operations immediately upon notification of such interference and shall inform the Commission immediately, in writing, of such event.

While EchoStar 6 is operating at 61.65° W.L. as an in-orbit spare, all transponders other than the TT&C transponders will remain off unless needed for backup, and it will abide by the following conditions:

- a) All operations at 61.65° W.L. shall be on a non-harmful interference basis, meaning that EchoStar shall not cause inference to, and shall not claim protection from, interference caused to it by any other lawfully operating satellites.

- b) In the event that any harmful interference is caused while the satellite is operating at 61.65° W.L., EchoStar shall cease operations immediately upon notification of such interference and shall inform the Commission immediately, in writing, of such event.

Respectfully submitted,

/s/

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February 3, 2010

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February 26, 2010

Via IBFS

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: **EchoStar Corporation - File No. SAT-STA-20100203-00020 (Call Sign S2232)**

Dear Ms. Dortch:

On behalf of EchoStar Corporation ("EchoStar"), this letter clarifies that the above-captioned request for operating special temporary authority also encompasses a request to test EchoStar 6 at 61.65° W.L. upon relocation of the satellite to 61.65° W.L. EchoStar 6 is currently en route from 72.7° W.L. to 61.65° W.L. and is expected to reach 61.65° W.L. by February 28, 2010. EchoStar respectfully requests the authority necessary to commence testing the satellite on Wednesday, March 3, 2010. The testing will be within the satellite operating parameters described in the above-captioned application.

Please contact me at 202.429.6494 or pmichalopoulos@steptoe.com if you have any questions.

Respectfully,

/s/

Pantelis Michalopoulos
Counsel for EchoStar Corporation