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File Number: SAT - STA - 20070409 - 00060
Callsign: *de-orbit DTV-2*

FEDERAL COMMUNICATIONS COMMISSION
APPLICATION FOR SPACE STATION SPECIAL TEMPORARY AUTHORITY

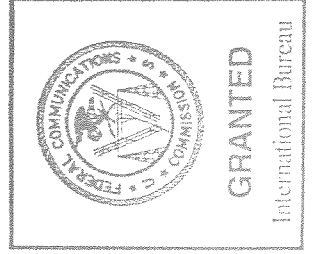
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APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:
STA - D2 - de-orbit @ 91WL

1. Applicant

Name:	DIRECTV Enterprises, LLC	Phone Number:	310-726-4993
DBA Name:		Fax Number:	310-535-5323
Street:	2230 E. Imperial Hwy	E-Mail:	dapattillo@directv.com
City:	El Segundo	State:	CA
Country:	USA	Zipcode:	90245
Attention:	Dave Pattillo		



File # SAT - STA - 20070409 - 00060

Call Sign _____ Grant Date April 16, 2007
(or other identifier)

Term Dates

From May 1, 2007 To: + 30 days

Approved: *[Signature]*

2. Contact	
Name: William M. Wiltshire	Phone Number: 202-730-1350
Company: Harris, Wiltshire & Grannis, LLP	Fax Number: 202-730-1301
Street: 1200 18th Street, NW	E-Mail: wwiltshire@harriswiltshire.com
City: Washington	State: DC
Country: USA	Zipcode: 20036 - -
Attention: William M. Wiltshire	Relationship: Legal Counsel
(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 CRY - Space Station (Geostationary)	
5. Type Request	
<input type="radio"/> Change Station Location	<input type="radio"/> Extend Expiration Date
	<input checked="" type="radio"/> Other
6. Temporary Orbit Location	
	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.)

See Exhibit A.

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
James Butterworth

11. Title of Person Signing
Senior Vice President

12. Please supply any need attachments.

Attachment 1: Exhibit A

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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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.

REQUEST FOR SPECIAL TEMPORARY AUTHORITY

DIRECTV Enterprises, LLC (“DIRECTV”) requests special temporary authority (“STA”), beginning on May 1, 2007 and lasting for a period of up to thirty (30) days, in order to (1) de-orbit its DIRECTV 2 satellite from its current location at the Broadcasting Satellite Service (“BSS”) slot allocated to Canada at 91° W.L. in the ITU Region 2 BSS Plan, and (2) perform telemetry, tracking and command (“TT&C”) functions with DIRECTV 2 during this maneuver.

Under an arrangement with Telesat Canada (“Telesat”), this satellite has been used by Telesat to support BSS service into Canada under a license issued by the Canadian government. The satellite has now reached the end of its useful life, and will soon be replaced by the DIRECTV 1 satellite.¹

DIRECTV intends to de-orbit DIRECTV 2 to a location consistent with both the guidelines established by the Inter-Agency Space Debris Coordination Committee (“IADC”)² and the Commission’s requirements for geostationary space stations operating at U.S.-licensed locations under authorizations issued after March 2002.³ The formula used by both the IADC and the Commission for this purpose is:

$$36,021 \text{ km} + (1000 * C_R * A/m)$$

where C_R is the solar pressure radiation coefficient of the spacecraft, and A/m is the Area to mass ratio, in square meters per kilogram, of the spacecraft. The relevant values for the DIRECTV 2 satellite are:

¹ The Commission has authorized DIRECTV to relocate DIRECTV 1 to the 91° W.L. orbital location, where it will replace DIRECTV 2. See File No. SAT-STA-20070126-00019 (granted March 8, 2007).

² See *Mitigation of Orbital Debris*, 19 FCC Rcd. 11567, ¶ 65 (2004).

³ 47 C.F.R. § 25.283.

$$\begin{aligned}C_R &= 0.5589 \\A &= 63.9 \text{ m}^2 \\m &= 1251 \text{ kg}\end{aligned}$$

Plugging these values into the equation yields the following results:

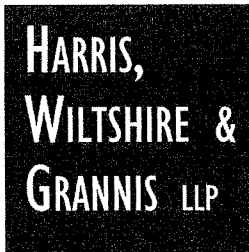
$$36,021 \text{ km} + (1000 * 0.5589 * (63.9 / 1251)) = 36,049.55 \text{ km}$$

Since geostationary altitude is generally considered to be 35,786 km,⁴ this yields a desired disposal orbit of at least 263.6 km above the geostationary arc. DIRECTV intends to boost DIRECTV 2 to at least this height, and in fact will target a height of approximately 300 km above geostationary altitude.

Grant of the requested STA will not present any significant risk of interference to other satellites. During the relocation of DIRECTV 2, the satellite's communications payload will remain inactive and only the TT&C payload will operate. DIRECTV requests authority to operate on the following TT&C frequencies: 17303.0 MHz and 17797.0 MHz (uplink) and 12201.0 and 12202.25 MHz (downlink). DIRECTV will coordinate with potentially affected satellite operators in accordance with industry practice, and will operate on a non-interference basis. Upon completion of de-orbit maneuvers, DIRECTV will ensure that all stored energy sources on board DIRECTV 2 are discharged by venting excess propellant, discharging batteries, relieving pressure vessels, and other appropriate measures.

For the foregoing reasons, DIRECTV urges the Commission to grant the requested STA as expeditiously as possible.

⁴ *Orbital Debris Mitigation*, ¶ 65.



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ATTORNEYS AT LAW

April 12, 2007

BY HAND DELIVERY

Andrea Kelly
Chief, Policy Branch
Satellite Division
International Bureau
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, DC 20554

Re: *FCC File No.* SAT-STA-20070409-00060

Dear Ms. Kelly:

In the above referenced proceeding, DIRECTV Enterprises, LLC ("DIRECTV") has requested Special Temporary Authority ("STA") to de-orbit the DIRECTV 2 satellite from the nominal 91° W.L. orbital location. After discussing the methodology for calculating the value for C_R used in the guideline formula established by the Inter-Agency Space Debris Coordination Committee ("IADC"), DIRECTV has concluded that a value of 1.2 would be more appropriate for purposes of this application. Accordingly, the IADC equation for DIRECTV 2 as revised yields the following results:

$$36,021 \text{ km} + (1000 * 1.2 * (63.9 / 1251)) = 36,082.294 \text{ km}$$

Since geostationary altitude is generally considered to be 35,786 km, this yields a desired disposal orbit of at least 296.3 km above the geostationary arc. As stated in its application, DIRECTV intends to boost DIRECTV 2 to a target height of approximately 300 km above geostationary altitude, which should be more than sufficient to satisfy this guideline.¹

¹ In addition, the figure used for the surface area of the satellite is a worst-case value, based on an unrealistically conservative assumption that the solar panels and reflectors will always be facing directly toward the sun.

HARRIS, WILTSHIRE & GRANNIS LLP

Andrea Kelly
April 12, 2007
Page 2 of 2

If you have any questions, please do not hesitate to contact me.

Respectfully submitted,

Handwritten signature of William M. Wiltshire in cursive script, followed by the initials "by MW".

William M. Wiltshire
Counsel to DIRECTV Enterprises, LLC

cc: Sankar Persuad