

File # SAT-STA-20070223-00039
with attached conditions.

Call Sign S2118 Grant Date 05/01/07
(or other identifier)

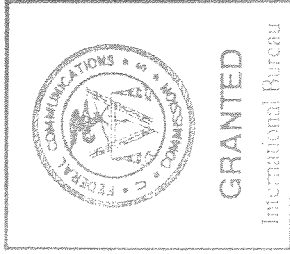
Approved by OMB
3060-0678

Term Dates

From 05/08/07 To: 08/06/07

Date & Time Filed: Feb 23 2007 4:11:14:680PM
File Number: SAT-STA-20070223-00039
Callsign:

Approved: *[Signature]*
Robert G. Nelson



FEDERAL COMMUNICATIONS COMMISSION
APPLICATION FOR SPACE STATION SPECIAL TEMPORARY AUTHORITY

FOR OFFICIAL USE ONLY

APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:
Request for 90-day Renewal of Special Temporary Authority to Operate XM-1 at 115.1W and to Drift to 85.2W

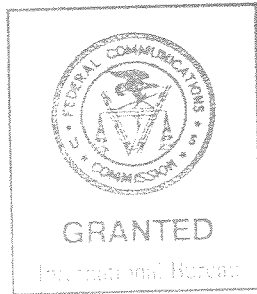
I. Applicant

Name:	XM Radio Inc.	Phone Number:	202-380-1383
DBA Name:		Fax Number:	202-380-4500
Street:	1500 Eckington Place, NE	E-Mail:	james.blitz@xmradio.com
City:	Washington	State:	DC
Country:	USA	Zipcode:	20002 -
Attention:	James S Blitz		

XM Radio Inc.
IBFS File No. SAT-STA-20070223-00039

The request of XM Radio Inc. (XM Radio) for special temporary authority (STA), IBFS File No. SAT-STA-20070223-00039, IS GRANTED for a period of 90 days, effective May 8, 2007. Accordingly, XM Radio is authorized to operate the Telemetry, Tracking, and Command (TT&C) payloads of the XM-1 satellite (Call Sign S2118) during the drift from the 115.1° W.L. orbital location to the 85.2° W.L. orbital location until August 6, 2007, subject to the technical specifications set forth in its application, the Commission's rules, and the following conditions:

1. XM Radio shall coordinate all drift orbit TT&C operations with other potentially affected in-orbit operators.
2. During relocation of the XM-1 satellite, operations via the XM-1 shall be on a non-harmful interference basis, *i.e.*, XM Radio shall not cause interference to, and shall not claim protection from interference caused to it by, any other lawfully operating satellites.
3. In the event that any harmful interference is caused as a result of XM Radio's operations during the relocation of the XM-1 satellite, XM Radio shall cease operations immediately upon notification of such interference and shall inform the Commission in writing immediately of such an event.



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From 05/08/07 To: 08/06/07

Approved: *[Signature]* Chief of Station
Robert G. Nelson *D. D'Isia*

2. Contact

Name: James S. Blitz **Phone Number:** 202-380-1383
Company: XM Radio Inc. **Fax Number:** 202-380-4500
Street: 1500 Eckington Place, NE **E-Mail:** james.blitz@xmradio.com

City: Washington **State:** DC
Country: USA **Zipcode:** 20002 -
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 SATSTA2006050100051 or Submission ID

4a. 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):

4b. Fee Classification CRY - Space Station (Geostationary)

5. Type Request

Change Station Location Extend Expiration Date Other

6. Temporary Orbit Location
115.1W

7. Requested Extended Expiration Date
2007-08-06 00:00:00.0

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.)

XM Radio Inc. requests a 90-day renewal of its current grant of Special Temporary Authority to operate its XM-1 satellite at the 115.1W.L. orbital location and to subsequently drift XM-1 to its licensed orbital location of 85.20W.L.

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 S. Blitz	11. Title of Person Signing Vice President, Regulatory Counsel
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12. Please supply any need attachments.

Attachment 1: Attachment A	Attachment 2:	Attachment 3:
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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).

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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.

Attachment A

XM Radio Inc. ("XM") hereby requests a 90-day renewal of its current grant of Special Temporary Authority ("STA") to operate its XM-1 satellite at the 115.1°W.L. orbital location and subsequently to drift XM-1 to its licensed orbital location of 85.20°W.L.¹ This renewal will serve the public interest by better enabling XM to ensure a safe transition of the XM-1 satellite to its permanent authorized orbital location at 85.2°W.L.²

Background. XM currently operates four satellites for the provision of Satellite Digital Audio Radio Service ("SDARS"). Each of XM's satellites is authorized to use S-band frequencies for service links (2332.5-2345 MHz (space-to-Earth)) and X-band frequencies for feeder links (7025-7075 MHz (Earth-to-space)).

On May 1, 2006, XM filed a request for a 180-day STA to permit the following operations relating to its XM-1 satellite: (i) drift XM-1 from the 115°W.L. to the 115.1°W.L. orbital location where the satellite would be collocated with the XM-2 satellite at 115.1°W.L.; (ii) operate XM-1, including its communications payload, at the 115.1°W.L. orbital location; (iii) cease transmissions on XM-1 (and operate only previously approved telemetry transmitters) after traffic is successfully transferred to the XM-4 satellite for a period of approximately 60 days; and (iv) subsequently drift XM-1 to its licensed orbital location of 85.20°W.L.³ The International Bureau ("Bureau") placed the application on Public Notice on June 9, 2006. *See* Report No. SPB-00368. No comments were filed in response to the STA request.

On August 15, 2006, the Bureau granted XM's STA request, subject to the condition that XM complete all of the authorized operations discussed in the STA request within 180 days after the commencement of the drift of XM-1 to the 115.1°W.L. orbital location. *XM-1 STA Grant* at Condition 4. XM commenced the drift of XM-1 on November 10, 2006, thereby establishing an expiration date for the STA of May 8, 2007.⁴

Request for STA. XM requests a renewal for a period of 90 days of its current STA grant to operate its XM-1 satellite at the 115.1°W.L. orbital location and to

¹ *See* XM Radio Inc., Application for Special Temporary Authority for XM-1, File No. SAT-STA-20060501-00051 (granted August 15, 2006) ("*XM-1 STA Grant*").

² XM understands that, pursuant to Section 1.62 of the Commission's Rules, this STA will continue in effect without further action by the Commission until such time as the Commission shall make a final determination with respect to this request.

³ *See* XM Radio Inc., Application for Modification of XM-1 License, File No. SAT-MOD-20060501-00052 (granted August 15, 2006) (granting XM's request for a modification of the license for the XM-1 satellite to specify operations at the 85.20°W.L. orbital location).

⁴ *See* Letter from James S. Blitz, XM Radio Inc., to Ms. Marlene H. Dortch, FCC, File No. SAT-STA-20060501-00050 (December 1, 2006).

subsequently drift XM-1 to its licensed orbital location of 85.20°W.L. As XM has disclosed previously, both its XM-1 and XM-2 satellites suffer from premature solar array degradation common to all Boeing spacecraft with solar array concentrators (*i.e.*, the first five launched Boeing 702 spacecraft and the first launched Boeing geo-mobile (GEM) spacecraft).⁵ It is this degradation that necessitated XM to construct the XM-3 and XM-4 replacement satellites.

Due to degradation of the XM-1 solar array concentrators, it is likely that XM-1 will suffer further concentrator failures in the upcoming eclipse season, which will take place from February 26, 2007 through April 13, 2007. The concentrator failures can potentially lead to imbalances in the solar torque applied to the spacecraft and can exacerbate momentum control of the satellite making a relocation maneuver more risky than if done outside of the eclipse period. After consultation with Telesat, the operator of Tracking, Telemetry, and Control (“TT&C”) for the XM satellites, XM believes it is prudent to delay the move of the XM-1 satellite from 115.1°W.L. to 85.2°W.L. until after the end of the eclipse season on April 13, 2007. The planned maneuver, if started on or about April 13, would result in a completion of the move to 85.2°W.L. by mid-July, beyond the expiration date of the current STA. While XM expects to complete the move of XM-1 to 85.2°W.L. by mid-July, XM is requesting a 90-day extension of its current STA (until August 6, 2007) in case of any unexpected delays in the move of the satellite.

XM will be operating only the command and telemetry system during this extended period. Moreover, XM hereby incorporates by reference the technical information pertaining to satellite antenna gain contours, power flux density levels, interference analysis, and link budgets provided in its previous STA request which the Bureau previously granted. XM has not received any complaints of interference during operation of XM-1 at 115.1°W.L.

XM will comply with all of the conditions adopted in the original STA grant for operation of XM-1 at 115.1°W.L. and the subsequent drift of XM-1 to 85.2°W.L, including the obligation to coordinate all drift orbit TT&C operations and to conduct operations during relocation on non-interference basis. *XM-1 STA Grant* at Condition 3.

Moreover, as explained in its original STA request, XM is unaware of any satellites other than XM-2 that are operational or planned to be deployed at or near the 115.1°W.L. orbital location during the requested renewal period whose station-keeping box will overlap with XM-1 at 115.1°W.L.

Schedule S Submission. As discussed in XM’s previous STA request which the Bureau has granted, operating XM-1 at 115.10°WL has no impact on any authorized system parameters and will not impact the existing interference environment. The information requested in Schedule S is thus duplicative of the information already on file for XM-1 at the Commission. Moreover, similar applications have been filed without a

⁵ See XM Radio Inc., Annual Report (June 30, 2004).

Schedule S and have been subsequently granted.⁶ Accordingly, XM is not submitting a Schedule S with this application.⁷

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

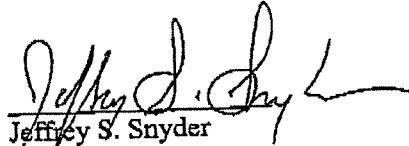
⁶ See, e.g., Application of PanAmSat, File No. SAT-MOD-20040405-00075 (April 5, 2004) (requesting modification of license for C-band satellite to specify orbital location of 125.05°WL rather than 125.00°WL); *Public Notice*, Report No. SAT-00222; DA No. 04-1746 (June 18, 2004) (granting PanAmSat application to modify license for C-band satellite to specify orbital location of 125.05°WL rather than 125.00°WL).

⁷ To the extent necessary, XM Radio requests a waiver of the Commission's rules to the extent they require a Schedule S to be submitted with an application for a space station STA. See 47 C.F.R. §1.3; see also *WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969). As discussed above, the good cause for this waiver is that the pertinent information required by Schedule S is already on file with the Commission and will not change as a result of continued operation of XM-1 at the 115.10°WL orbital location.

Technical Certification

I, Jeffrey S. Snyder, Senior Vice President, Space Systems, of XM Radio Inc.,
certify under penalty of perjury that:

I am the technically qualified person with overall responsibility for preparation of
the technical information contained in XM's "Application for Renewal of Special
Temporary Authority." I am familiar with the requirements of Part 25 of the
Commission's rules, and the information contained in the application is true and correct
to the best of my knowledge and belief.


Jeffrey S. Snyder

Dated: February 23, 2007