Approved by OMB
3060–0678

Date & Time Filed: Mar 30 2007 3:28:21:106PM
File Number: SAT–STA–20070330–00059
Callsign:

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:
Request for 180–day STA to operate a substitute low power repeater in Las Vegas, NV

1. Applicant

Name:	XM Radio Inc.	**Phone Number:**	202–380–4000
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		

GRANTED
International Bureau

File # SAT-STA-20070330-00059
Call Sign _____ Grant Date May 25 2007
(or other identifier)
Term Dates
From May 25, 2007 To: + 180 days
Approved: w/conditions / Policy Branch Chief

Application of XM Radio Inc. for Special Temporary Authority
IBFS File No. SAT-STA-20070330-00059

Special temporary authority (STA) IS GRANTED to XM Radio Inc. (XM) to operate one terrestrial repeater with a power level less than 2 kW Effective Isotropically Radiated Power (EIRP) for a period of 180 days on top of Harrah's Casino Hotel in Las Vegas, pursuant to the technical parameters specified in its application and subject to the following conditions:

1. Any actions taken as a result of this STA are solely at the applicant's own risk. This STA shall not prejudice the outcome of the final rules adopted by the Commission in IB Docket No. 95-91. The issue concerning EIRP raised by the WCS Coalition will be addressed in that proceeding. Operations prior to such action will be subject to condition 2 below.

2. Operation of all SDARS repeaters authorized pursuant to this STA is on a non-interference basis with respect to all permanently authorized radiocommunication facilities. XM shall provide the information and follow the process set forth in paragraphs 14 and 17 in 16 FCC Rcd 16773 (Int'l Bur. 2001) and 16 FCC Rcd 16781 (Int'l Bur. 2001), as modified by 16 FCC Rcd 18481 (Int'l Bur. 2001) and 16 FCC Rcd 18484 (Int'l Bur. 2001).

3. SDARS repeaters are restricted to the simultaneous retransmission of the complete programming, and only that programming, transmitted by the satellite directly to SDARS subscriber's receivers.

4. Coordination of SDARS repeater operations shall be completed with all affected Administrations prior to operation, in accordance with all applicable international agreements including those with Canada and Mexico.

5. SDARS repeaters shall comply with Part 17 of the Commission's rules – Construction, Marking, and Lighting of Antenna Structures.

6. SDARS repeaters shall comply with Part 1 of the Commission's rules, Subpart I – Procedures Implementing the National Environmental Policy Act of 1969, including the guidelines for human exposure to radio frequency electromagnetic fields as defined in Sections 1.1307(b) and 1.1310 of the Commission's rules.

7. SDARS repeater out-of-band emissions shall be limited to 75+log(EIRP) dB less than the transmitter EIRP.

FEDERAL COMMUNICATIONS COMMISSION

GRANTED

International Bureau

w/conditions

File # SAT-STA-20070330-00059

Call Sign _____ Grant Date May 25 2007

(or other identifier)

Term Dates

From May 25 2007 To: + 180 days

Approved: Kelly

Policy Branch Chief

2. Contact

Name:	James S. Blitz	**Phone Number:**	202–380–4000
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:**	Same

(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?

◉ 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	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.)

XM Radio Inc. (XM) requests Special Temporary Authority to operate a substitute low power terrestrial repeater (less than 2 kw EIRP) for one hundred eighty days on top of Harrah's Casino Hotel in Las Vegas pursuant to the technical parameters listed in 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	11. Title of Person Signing
James S. Blitz	VP, Regulatory Counsel

12. Please supply any need attachments.

Attachment 1: STA Request	Attachment 2: Exhibits	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.

March 30, 2007

Via IBFS
Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: XM Radio Inc.
Request for 180-Day Special Temporary Authority to Operate
A Substitute Low Power Repeater in Las Vegas, Nevada

Dear Ms. Dortch:

Pursuant to Section 25.120(b)(4) of the Commission's rules, 47 C.F.R. § 25.120(b)(2), XM Radio Inc. ("XM"), a Satellite Digital Audio Radio Service ("SDARS") licensee, hereby requests Special Temporary Authority ("STA") to operate in its licensed frequency band (2332.5-2345 MHz) a substitute low power repeater in Las Vegas, Nevada (the "Substitute Repeater") pursuant to the technical parameters listed in Exhibit A.

XM will operate the Substitute Repeater in place of another repeater (LVX002A) that XM was required to remove from atop the Stardust Hotel (the "Stardust Repeater"), which was razed on March 13, 2007.[1] The Substitute Repeater will operate at only 1068 Watts average EIRP (equivalent to 5500 watts peak EIRP) which is lower than the average EIRP authorized for the Stardust Repeater (1247 Watts). Located atop Harrah's Casino Hotel, the Substitute Repeater is needed to supplement service to areas of Las Vegas on and around "The Strip," where XM's satellite signal is shielded by a high concentration of tall buildings. (Exhibit B hereto provides a view of the high-rise buildings near the area to be served by this repeater.) Based on drive-testing to determine the service outages in this area caused by building blockage, XM has determined that the proposed power level for the Substitute Repeater is the minimum power required to provide adequate coverage to these shielded areas. Grant of the STA will therefore

[1] On October 13, 2006, XM applied for a 180-day STA to operate a repeater at this location, identifying the Stardust Repeater as a site that it had to relocate to ensure continued service to subscribers. *See* File No. SAT-STA-20061013-00119 (filed October 13, 2006), at Exhibit A.2. On March 22, 2007, XM amended that application to remove the Stardust Repeater replacement from the list of repeaters in Exhibit A.

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serve the public interest by restoring repeater service to residents of Las Vegas, thereby ensuring that they continue to receive high quality satellite radio service.[2]

This request is distinct from a 30 day STA authorization the International Bureau (the "Bureau") granted to XM on December 28, 2006.[3] That authorization, which was also needed because the Stardust Repeater was decommissioned, allowed XM to operate a very low power repeater atop a building adjacent to the Las Vegas Convention Center for the limited purpose of providing signal coverage for the 2007 Consumer Electronics Show. XM discontinued operations on that low power repeater on January 12, 2007, following the conclusion of the CES convention.

The Commission has recognized that SDARS operators require terrestrial repeaters to provide high-quality service nationwide.[4] Consistent with this policy, in September 2001, the Bureau granted XM an STA to operate a nationwide network of terrestrial repeaters, including the Stardust Repeater.[5] In the years since, the Bureau has granted XM additional STAs to operate its terrestrial repeaters, pending issuance of final rules governing the deployment and use of repeaters.[6]

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[2] The Bureau previously granted Sirius Satellite Radio Inc. a 30-day STA to operate a substitute medium power repeater in place of a repeater that was located atop the Stardust Hotel. *See* Sirius Satellite Radio Inc., File No. SAT-STA-20061107-00133 (filed November 7, 2006; granted November 15, 2006); *Public Notice*, Report No. SAT-00403, DA 06-2322 (November 17, 2006).

[3] *See* XM Radio Inc., File No. SAT-STA-20061218-00153 (filed December 18, 2006; granted December 28, 2006); *Public Notice*, Report No. SAT-00410, DA 07-19 (January 5, 2007).

[4] *See Establishment of Rules and Policies for the Digital Audio Radio Satellite Service in the 2310-2360 MHz Frequency Band, Report and Order, Memorandum Opinion and Order, and Further Notice of Proposed Rulemaking*, 12 FCC Rcd 5754, 5770 (¶ 37) (1997) ("*DARS Order and FNPRM*").

[5] *See XM Radio, Inc., Application for Special Temporary Authority to Operate Satellite Digital Audio Radio Service Complimentary Terrestrial Repeaters, Order and Authorization*, DA 01-2172, 16 FCC Rcd 16781, at ¶ 18 (rel. September 17, 2001) ("*XM STA Order*").

[6] *See, e.g., XM Radio, Inc.; Request for Special Temporary Authority to Operate Additional Satellite Digital Audio Radio Service Terrestrial Repeaters, Order and Authorization,* 19 FCC Rcd. 18140 (2004) (granting XM an STA in File No. SAT-STA-20031112-00371, effective Sept. 15, 2004); *Public Notice*, 2002 FCC Lexis 5670 (rel. Oct. 30, 2002) (granting XM an STA in File No. SAT-STA-20020815-00153, effective Sept. 30, 2002); *Public Notice*, 2003 FCC Lexis 4803 (rel. Aug. 29, 2002) (granting XM an STA in File No. SAT-STA-20030409-00076, effective June 26, 2003). XM has filed applications to renew its STAs, and those renewal applications are pending before the Commission.

Extraordinary circumstances – in particular the removal of antennas from the Stardust Hotel necessitated by the hotel's demolition – justify this STA request.[7] XM was required to remove its repeater from this location in December 2006. As the Bureau recognized when it granted the original XM STA in 2001, XM's terrestrial repeater network enables it to provide "high quality radio signals to listeners in areas that have limited radio service," continuous high-quality radio coverage for individuals on long-distance trips, and "[d]iverse program formats, including educational, ethnic and religious programming."[8] In this case, grant of the STA will serve the public interest by restoring service to residents of Las Vegas, thereby ensuring that they continue to receive the diverse, high-quality service they have come to expect.

Technical Information for Substitute Low Power Repeater. Attached as Exhibit A is the following technical information pertaining to the Substitute Repeater requested herein: (1) antenna type; (2) antenna orientation; (3) average EIRP; (4) height above ground level ("AGL"); (5) antenna downtilt; and (6) antenna specification sheets.

Interference Considerations. As noted above, the Substitute Repeater will operate at only 1068 Watts average EIRP, which is less than the power of the repeater that is being replaced (1247 Watts).[9] Because XM did not receive any complaints of interference pertaining to its operation of the repeater being replaced, it is even less likely that this lower power repeater will create interference to other licensees. If prohibited interference does occur, XM will cease operation of the repeater until such interference can be eliminated. While XM's original 2001 STA requires it to coordinate with affected Wireless Communications Services ("WCS") licensees prior to operating any repeater,[10] XM is not aware of any operational WCS facilities in the Las Vegas area.[11]

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[7] *See* 47 U.S.C. § 309(f); 47 C.F.R. § 25.120(b)(1).

[8] *XM STA Order*, 16 FCC Rcd at 16784 (¶ 9).

[9] As a point of reference, the peak power of this repeater will exceed 2 kw EIRP, as did the repeater on the Stardust Hotel. XM recognizes that the FCC intends to address the issue concerning peak vs. average EIRP raised by the WCS Coalition in IB Docket No. 95-91. *See* File No. SAT-STA-20061114-00138 (granted Feb. 7, 2007).

[10] *See XM Radio STA Order* ¶ 14.

[11] In the *XM Radio STA Order*, the Bureau stated that it expects "WCS licensees to provide a schedule or as much advance notice as possible of when their stations are to be placed in operation." *XM Radio STA Order* ¶ 14. To date, XM has not received information from any WCS licensee regarding their plans for WCS deployment.

Ownership and Control of Repeaters. XM will own the substitute low power repeater subject to this request, and it will be responsible for its installation and operation.

Certifications. XM certifies that it will operate this substitute low power repeater subject to the conditions and certifications set forth in the *XM Radio STA Order* granting XM's September 2001 request for STA to operate terrestrial repeaters. Granting this request will not alter XM's obligation to protect authorized radiocommunications facilities from interference, and it will not prejudice the outcome of the Commission's ongoing rulemaking pertaining to the deployment and operation of terrestrial repeaters.

XM hereby certifies that no party to this application is subject to a denial of Federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 853(a).

XM is submitting payment to the Federal Communications Commission in the amount of Seven Hundred Ninety Dollars ($790.00) -- the filing fee applicable to requests for STAs for geostationary ("GSO") satellites. *See* International and Satellite Services Fee Filing Guide (October 2006).

Please direct any questions regarding this matter to the undersigned.

Very truly yours,

James S. Blitz
Vice President, Regulatory Counsel

cc: Stephen Duall, FCC

Exhibit A

CITY	CITY ABBR.	SITE NO.	ANTENNA NUMBER	SITE LATITUDE (N)	SITE LONGITUDE (W)	ANTENNA TYPE	ANTENNA ORIENTATION (DEG AZ)	ANT HEIGHT (FEET AGL)	ANTENNA DOWNTILT (DEG)	TOTAL AVERAGE EIRP (W)
Las Vegas	LVX	002B	Tx1	36-07-10	115-10-14	TA-2350-DAB	0	356	0	1068

Exhibit B

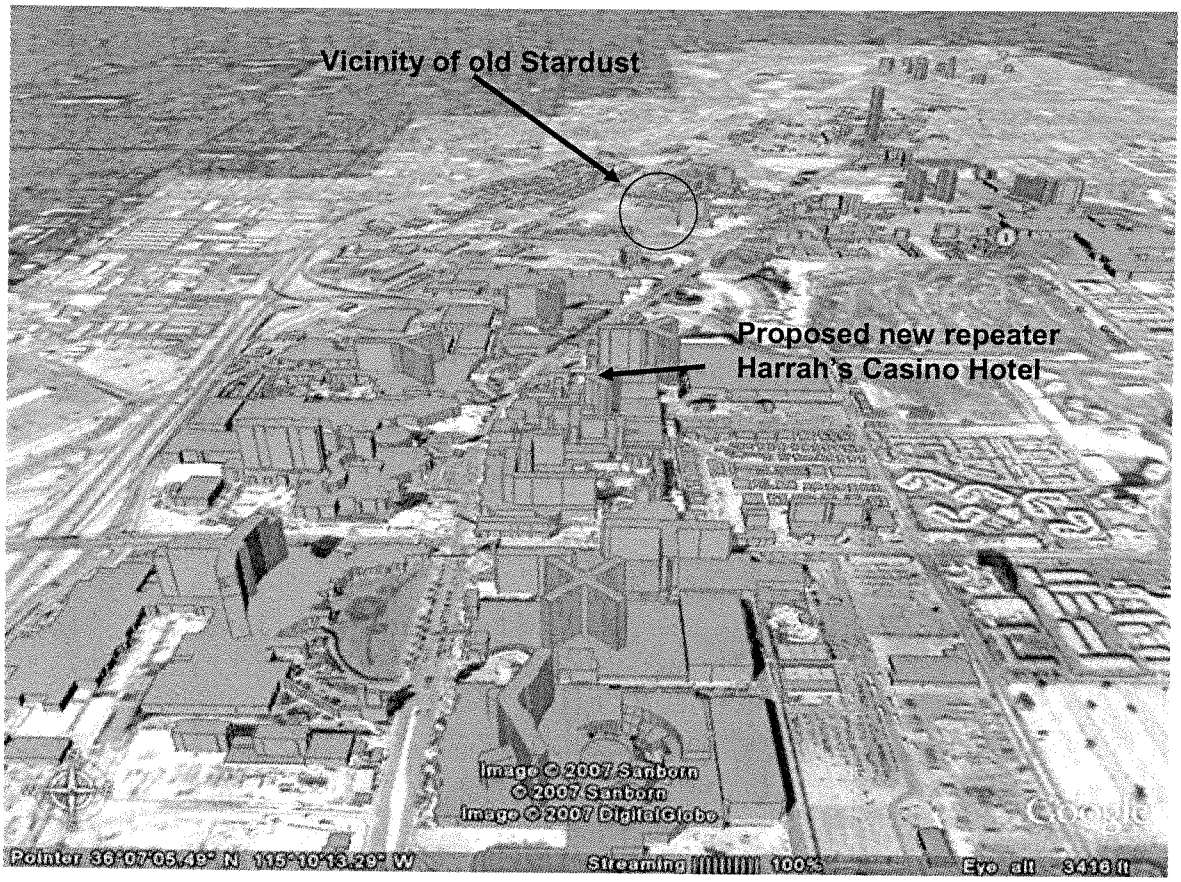
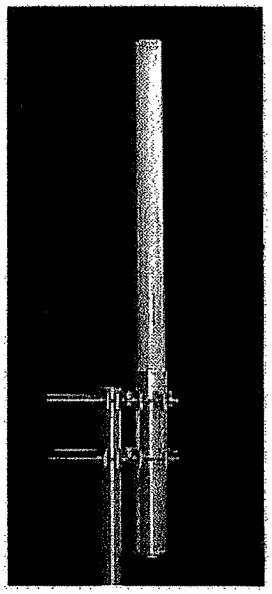

Vicinity of old Stardust
Proposed new repeater
Harrah's Casino Hotel
Image © 2007 Sanborn
© 2007 Sanborn
Image © 2007 DigitalGlobe
Google
Pointer 36°07'05.49" N 115°10'13.28" W
Streaming 100%
Eye alt 3418 ft

Exhibit C
Antenna Specification Sheet

TA-2350-DAB

Medium Power Omnidirectional

2330-2345 MHz



The TA-2350-DAB is a medium power vertically polarized omnidirectional antenna specifically designed for Digital Audio Broadcast transmission. The antenna consists of a phased corporately fed broadband dipole array which is configured to provide electrical beam downtilt and null fill. The antenna elements are at DC ground to aid in lightning protection.

Electrical Specifications

Frequency Range: 2330-2345 MHz
Gain: 10 dBi
VSWR: 1.4:1 max.
Polarization: Vertical
Power Rating: 200 W avg., 800 W peak
H-Plane Beamwidth: 360 degrees
E-Plane Beamwidth: 8 degrees
Electrical_Downtilt: 2, 4, 6 degrees
Cross Pol. Discrimination: 20 dB min.
Null Fill: -20 dB (1st Null)
Impedance: 50 ohms nominal
Termination: 7/16 DIN female

Typical mid band values. (For details , contact factory)

Mechanical Specifications

Length: 70 in. (1778 mm)
Diameter: 2.25 in. (57 mm)
Weight (Incl. Clamps): 15 lb. (6.8 kg)
Rated Wind Velocity: 125 mph (200 km/h)
Hor. Thrust at rated wind: 31 lb. (14 kg)
Mounting Pipe: 1.75 - 4.0 in. (44.5 - 102 mm)

Materials

Radiating Elements: Nickel plated copper array
Radome: Gray UV stabilized fiberglass
Clamps: HDG steel

E-Plane