

SIRIUS XM

RADIO INC.

1500 Eckington Place, N.E.
Washington, D.C. 20002
Tel: 202-380-4000
Fax: 202-380-4500
www.sirius.com www.xmradio.com

FILED/ACCEPTED

JUL 20 2009

Federal Communications Commission
Office of the Secretary

Call sign S2118:

SAT-MOD-20090217-00024

SAT-TIC-20070320-00054

SAT-LIA-19930115-00011

Call sign S2119:

SAT-MOD-20081029-00211

SAT-LIA-19930115-00010

Call sign: S2616

SAT-RPL-20040212-00018

SAT-TIC-20070320-00054

July 20, 2009

Call sign: S2617

SAT-AMD-20080129-00033

SAT-RPL-20040212-00019

Call sign: S2786

SAT-LDA-20090217-00025

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

Re: XM Radio Inc. Improved Modulation Technology
Call Signs S2118, S2119, S2616, S2617, S2786

Dear Ms. Dortch:

XM Radio Inc. ("XM") hereby notifies the Commission that beginning today, XM intends to commence long-term testing and deployment of an improved modulation technology over its satellites. The planned modulation, known as hierarchical or overlay modulation, is expected to increase XM's total network capacity by approximately twenty-five percent. Essentially, hierarchical modulation increases the number of bits that are transmitted through the satellite and terrestrial repeater networks, thereby improving spectrum efficiency. Once this modulation system has been fully implemented, XM may be able to add additional programming and innovative ancillary services for the benefit of its satellite radio subscribers.¹

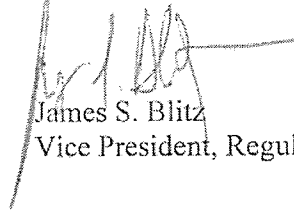
XM's planned modulation change conforms to the technical parameters of XM's currently authorized satellites and terrestrial repeaters. Similarly, the new modulation conforms to the technical parameters described in XM's pending application for the new XM-5 satellite and other pending authorizations.

¹ Satellites providing the Sirius satellite radio service have used hierarchical modulation since June 2005. See "SIRIUS to Increase Programming Capacity Over Its Existing Satellite Radio System," <http://investor.sirius.com/ReleaseDetail.cfm?releaseid=165885> (last visited July 20, 2009).

Marlene H. Dortch, Secretary
July 20, 2009
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Should any questions arise in connection with this matter, please contact the undersigned.

Very truly yours,

A handwritten signature in black ink, appearing to read "James S. Blitz", with a horizontal line extending to the right from the end of the signature.

James S. Blitz
Vice President, Regulatory Counsel

cc (via email): John Giusti
Julius Knapp
Robert Nelson