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August 23, 2012

***By Electronic Filing***

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

**Re: Promoting Expanded Opportunities for Radio Experimentation and Market Trials Under Part 6 of the Commission's Rules and Streamlining Other Related Rules, ET Docket No. 10-236**

**2006 Biennial Review of Telecommunications Regulations – Part 2 Administered by the Office of Engineering and Technology, ET Docket No. 06-155**

***Written Ex Parte Presentation***

Dear Ms. Dortch:

Sirius XM Radio Inc. ("Sirius XM"), by its attorney, submits this letter responding to recent *ex parte* presentations in the above-referenced proceeding. A number of these filings have addressed whether the Commission should exercise its authority to impose coordination requirements on the holder of an experimental authorization. For the reasons discussed below, Sirius XM urges the Commission to routinely include coordination requirements as part of experimental authorizations that overlap Sirius XM's licensed frequencies at 2320-2345 MHz or propose high-power operations at the adjacent WCS frequencies. Such a requirement fairly places the burden of preventing interference to Sirius XM's licensed operations on an experimental applicant, rather than on Sirius XM, a licensee providing service in a band where it is authorized to operate. Sirius XM also endorses other recommendations to protect licensed operations from harmful interference caused by experimental systems.

**Background**

Sirius XM is the licensee of Satellite Digital Audio Radio System ("SDARS") networks in the 2320-2332.5 MHz and 2332.5-2345 MHz bands that provide a high-quality, continuous, multi-channel audio service throughout the United States. Nearly twenty-three million customers currently subscribe to Sirius XM's service. In addition to carrying music, sports, talk, and other entertainment programming, Sirius XM delivers timely news and weather information and participates in the Emergency Alert System,<sup>1</sup> not only by transmitting national alerts to satellite

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<sup>1</sup> See 47 C.F.R. § 11.51(i).

radio subscribers, but also by partnering with the Federal Emergency Management Agency to provide a backup mechanism for distributing those alerts to other Primary Entry Point stations in the United States. Thus, the Sirius XM SDARS network serves as a key source of information that can be critical to listeners in the event of a natural disaster or public safety emergency.

In the pending rulemaking, the Commission is considering measures to streamline the Experimental Radio Service (“ERS”) licensing process to encourage innovation.<sup>2</sup> The Commission has made clear, however, that incumbent licensed operations must be protected from harmful interference resulting from ERS operations.<sup>3</sup> In particular, the Commission has stressed that spectrum used for the provision of emergency notifications or other public safety communications should not be subjected to disruptive interference, and it has proposed special measures to protect such services.<sup>4</sup>

In response to the NPRM, a broad range of commenters emphasized that the Commission’s efforts to facilitate ERS systems should not come at the expense of robust protections for fully licensed systems.<sup>5</sup> In particular, parties objected to proposals in the NPRM requiring licensees to monitor an ERS database and raise interference concerns, since such an approach “improperly shifts the burden of policing compliance with the Commission’s interference-avoidance requirements to parties with superior spectrum rights.”<sup>6</sup>

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<sup>2</sup> See *Promoting Expanded Opportunities for Radio Experimentation and Market Trials under Part 5 of the Commission’s Rules and Streamlining Other Related Rules; 2006 Biennial Review of Telecommunications Regulations – Part 2 Administered by the Office of Engineering and Technology (OET)*, Notice of Proposed Rulemaking, ET Docket Nos. 10-236 and 06-105, FCC 10-197 (rel. Nov. 30, 2010) (“NPRM”).

<sup>3</sup> See *id.* at ¶ 25 (“we emphasize that all experiments must be conducted on a non-interference basis to primary and secondary licensees, and that the licensee must take all necessary technical and operational steps to avoid harmful interference to authorized services”) (footnote omitted).

<sup>4</sup> See *id.* at ¶ 31.

<sup>5</sup> See, e.g., Comments of AT&T Inc., ET Docket No. 10-236 (filed March 10, 2011) (“AT&T Comments”) at 3-8; Comments of CTIA – The Wireless Association, ET Docket No. 10-236 (filed March 10, 2011) at 2-5; Comments of EIBASS, ET Docket No. 10-236 (filed March 10, 2011) (“EIBASS Comments”) at 9-10; Comments of Motorola Solutions, Inc., ET Docket No. 10-236 (filed March 10, 2011) at 4; Comments of Qualcomm Incorporated, ET Docket No. 10-236 (filed March 10, 2011) at 9-10; Comments of the Satellite Industry Association, ET Docket No. 10-236 (filed March 10, 2011) at 8-10; Comments of Telecommunications Industry Association, ET Docket No. 10-236 (filed March 10, 2011) at 6-7; Comments of Wireless Communications Association International, Inc., ET Docket No. 10-236 (filed March 10, 2011) (“WCA Comments”) at 8; Reply Comments of the Satellite Industry Association, ET Docket No. 10-236 (filed April 8, 2011) (“SIA Reply Comments”) at 3-5.

<sup>6</sup> SIA Reply Comments at 3-5. See also AT&T Comments at 6 (“A party that proposes to experiment in licensed bands used by hundreds of millions of consumers and which support emergency services and first responders clearly should bear the burden to

Recent *ex parte* submissions by Boeing and Clearwire discussed these issues in the context of the Commission's use of prior coordination requirements as conditions to ERS authorizations.<sup>7</sup> Boeing suggested that such conditions are imposed too frequently and that ERS applications that meet a set of "safe harbor" characteristics should be exempt from prior coordination requirements.<sup>8</sup> Clearwire responded that in its experience, ERS authorization holders often ignore coordination conditions, and coordination should be completed prior to filing an ERS application.<sup>9</sup> Clearwire indicated that it has no objection to a "safe harbor" exception to coordination requirements under appropriate circumstances,<sup>10</sup> and it has also asked the Commission to address abuses of the experimental process.<sup>11</sup>

#### Discussion

Sirius XM fully agrees with commenters who emphasize that the interests of ERS authorization holders must remain secondary to the rights of licensed operators to protect their operations from harmful interference. For the reasons discussed below, in order to protect satellite radio customers' ability to continue receiving quality service, the Commission should routinely impose coordination requirements on any ERS applicant seeking to operate in Sirius XM's licensed frequencies or at high power levels in the adjacent frequencies. Sirius XM does not object to a safe harbor exception to such coordination requirements under the narrow circumstances proposed by Boeing. In addition, we agree with Clearwire that the Commission should enforce

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demonstrate that the experimental use they propose would not result in harmful interference."); EIBASS Comments at 9; WCA Comments at 8.

<sup>7</sup> See Letter from Bruce A. Olcott, Counsel, The Boeing Company, to Marlene H. Dortch, Secretary, Federal Communications Commission, ET Docket Nos. 10-236 and 06-155 (filed May 2, 2012) ("Boeing May 2 *Ex Parte*"); Letter from Nadja S. Sodos-Wallace, Senior Regulatory Counsel, Clearwire Corporation, to Marlene H. Dortch, Secretary, Federal Communications Commission, ET Docket Nos. 10-236 and 06-155 (filed May 17, 2012) ("Clearwire May 17 *Ex Parte*"); Letter from Nadja S. Sodos-Wallace, Senior Regulatory Counsel, Clearwire Corporation, to Marlene H. Dortch, Secretary, Federal Communications Commission, ET Docket Nos. 10-236 and 06-155 (filed June 21, 2012) ("Clearwire June 21 *Ex Parte*"); Letter from Bruce A. Olcott, Counsel, The Boeing Company, to Marlene H. Dortch, Secretary, Federal Communications Commission, ET Docket Nos. 10-236 and 06-155 (filed July 9, 2012) ("Boeing July 9 *Ex Parte*"); Letter from Cathleen A. Massey, Vice President, Regulatory Affairs and Public Policy, Clearwire Corporation, to Marlene H. Dortch, Secretary, Federal Communications Commission, ET Docket Nos. 10-236 and 06-155 (filed July 10, 2012) ("Clearwire July 10 *Ex Parte*"); Letter from Bruce A. Olcott, Counsel, The Boeing Company, to Marlene H. Dortch, Secretary, Federal Communications Commission, ET Docket Nos. 10-236 and 06-155 (filed July 23, 2012) ("Boeing July 23 *Ex Parte*").

<sup>8</sup> See Boeing May 2 *Ex Parte* at 1-2.

<sup>9</sup> See Clearwire May 17 *Ex Parte* at 1-6.

<sup>10</sup> See Clearwire June 21 *Ex Parte* at 1-2.

<sup>11</sup> See Clearwire May 17 *Ex Parte* at 6-8.

coordination requirements and discontinuance rules against holders of ERS authorizations and should grant experimental authorizations only for purposes specified in the rules.

Boeing's statement that coordination conditions are overused in ERS authorizations and applied in situations in which there is no material risk of interference from the proposed experimental operations,<sup>12</sup> does not square with Sirius XM's experience. Experimental authorizations in and near the SDARS band are routinely granted with no requirement that the experimental user coordinate its operations in advance with Sirius XM. This places a heavy and unfair burden on Sirius XM, especially because our satellite signal is highly attenuated when it reaches earth and is therefore extremely susceptible to harmful interference.<sup>13</sup> Sirius XM has also experienced such interference more frequently in recent years.

The one-way nature of satellite radio service means Sirius XM is not immediately aware of third-party interference and cannot quickly pinpoint the source of interference in order to seek redress. Relying on customer complaints is impractical, since customers experiencing interference rarely report it to the company but may simply become dissatisfied with their service. This problem is exacerbated because subscribers justifiably expect the quality of their Sirius XM service, for which they pay monthly, will be superior to that of competitive services (such as broadcast or internet-delivered audio), for which they do not pay out of pocket.

To protect our frequencies and service quality from interference due to ERS operations, Sirius XM monitors the Commission's database for experimental filings seeking authority in or near the Sirius XM bands. Because ERS licensees have not been required to coordinate with us in advance, we instead contact each experimental applicant whose filing raises a concern and attempt to work out a solution that protects our operations. In some cases we obtain additional information that allows us to conclude that the experimental operations do not pose a material risk to Sirius XM reception.<sup>14</sup> In other cases, we have requested prior notification of experimental operations in or near the satellite radio band. Where our analysis shows it is necessary, we have asked ERS applicants to "notch out" the satellite radio band or adjacent

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<sup>12</sup> See Boeing May 2 *Ex Parte* at 1. (suggesting that the Commission's use of discretion to impose coordination conditions under § 5.85(e) "appears to have been abandoned, with coordination and consent conditions routinely imposed on the experimental use of numerous spectrum bands regardless of whether coordination is warranted by the nature of the proposed experimental operations").

<sup>13</sup> See, e.g., Comments of Sirius XM Radio Inc., WT Docket No. 07-293, IB Docket No. 95-91, GEN Docket No. 90-357, RM No. 8610 (filed Apr. 23, 2010) at 6 ("satellite services – broadcasting from thousands of miles in space and reliant on relatively weak ground signals – remain highly susceptible to interference from terrestrial base stations, mobile transceivers, and customer premises equipment operating at relatively high power levels perhaps just a few feet away from satellite radio receivers") (footnote omitted).

<sup>14</sup> For example, Boeing has been very responsive when Sirius XM has raised questions about its ERS applications, and we have been able to resolve concerns about a number of such Boeing applications through an exchange of more detailed technical information.

bands from experimental operations in order to protect satellite radio subscribers from experiencing signal loss due to interference.

In short, the Commission's current practices impose the burden of identifying and addressing any interference risk arising from proposed experimental operations on Sirius XM instead of on the experimental applicant seeking to operate in or near our licensed band. That burden should be reversed.

Specifically, we agree with Boeing that the Commission should re-evaluate its approach to coordination requirements and impose them on a targeted basis, focusing on experimental operations that "pose an appreciable risk of causing harmful interference."<sup>15</sup> Experimental applications seeking to use SDARS frequencies or operate at high power levels in adjacent frequencies clearly pose such a risk given the susceptibility of the Sirius XM signal to harmful interference and the impossibility of promptly detecting and addressing harmful interference if it does occur. Accordingly, the Commission should routinely require that experimental applicants coordinate with Sirius XM if the applicant's requested frequencies overlap the Sirius XM licensed band, or if operations at power limits above those specified in Part 27 are proposed in the adjacent WCS bands (2305-2320 MHz or 2345-2360 MHz).<sup>16</sup> As Clearwire has explained, the most effective way to ensure coordination actually takes place is to require completion of coordination before an ERS proponent files its application.<sup>17</sup>

Sirius XM acknowledges that exceptions to a routine coordination requirement may be justified if the applicant takes steps to minimize the interference risk. Thus, we have no objection to implementation of a safe harbor exempting an applicant from coordination requirements under the terms identified by Boeing.<sup>18</sup>

As noted above, the Commission has proposed that extra safeguards apply where an experimental applicant seeks to use bands with public safety operations.<sup>19</sup> Because Sirius XM

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<sup>15</sup> Boeing July 9 *Ex Parte* at 5.

<sup>16</sup> Similarly, protection of Sirius XM uplink signals from harmful interference is also critical, as interference to feeder links would affect subscribers anywhere within a satellite's footprint and reception of command signals is essential to safe spacecraft operation. Accordingly, Sirius XM requests that the Commission require prior coordination for any experimental application proposing operations in the 6875-7125 MHz band used for Sirius XM uplink transmissions.

<sup>17</sup> See Clearwire May 17 *Ex Parte* at 1-6.

<sup>18</sup> Any concern Boeing may have about incumbents failing to coordinate in good faith with experimental applicants (see Boeing May 2 *Ex Parte* at 2) is unfounded with respect to Sirius XM. In addition to its licensed operations, Sirius XM itself has often sought ERS authority, and Sirius XM understands the importance of ensuring that requests for coordination are addressed promptly and in a spirit of good faith.

<sup>19</sup> See NPRM at 64, proposed Section 5.311, Additional requirements related to safety of the public.

is part of the Commission's Emergency Alert System, the Commission should make clear that these additional requirements will be triggered by a request to use SDARS spectrum.

Finally, Sirius XM endorses Clearwire's suggestions regarding refinements to the ERS regulatory framework.<sup>20</sup> We agree that the Commission should grant experimental authority only for a purpose specified in the rules and should enforce both coordination requirements and discontinuance rules against experimental licensees.

Sirius XM requests that the Commission take into account the views set forth herein in its consideration of the issues raised by the NPRM. Please address any questions regarding this matter to the undersigned.

Respectfully submitted,

*/s/ Karis A. Hastings*

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<sup>20</sup> See Clearwire May 17 *Ex Parte* at 6-8.