

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Amendment of Part 27 of the	)	
Commissions Rules to Govern the	)	WT Docket No. 07-293
Operation of Wireless Communications	)	
Services in the 2.3 GHz Band	)	
	)	
Establishment of Rules and Policies for the	)	IB Docket No. 95-91
Digital Audio Radio Satellite Service in the	)	GEN Docket No. 90-357
2310-2360 MHz Frequency Band	)	RM No. 8610

**COMMENTS OF THE  
NATIONAL ASSOCIATION OF BROADCASTERS**

The National Association of Broadcasters (“NAB”)<sup>1</sup> submits these comments in the above-captioned proceeding.<sup>2</sup> Much of the Notice explores issues related to the coexistence of satellite digital audio radio service (“SDARS”) terrestrial repeaters and licensees of Wireless Communications Service (“WCS”) in adjacent frequency bands, on which NAB does not comment herein. NAB will confine its comments to the following matters raised in the Notice that more directly concern broadcasters: (1) eligibility to operate SDARS repeaters; and (2) local program origination from SDARS repeaters.

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<sup>1</sup> NAB is a nonprofit trade association that advocates on behalf of more than 8,300 free, local radio and television stations and also broadcast networks before Congress, the Commission and the Courts.

<sup>2</sup> In the Matter of Amendment of Part 27 of the Commissions Rules to Govern the Operation of Wireless Communications Services in the 2.3 GHz Band, WT Docket No. 07-293; and Establishment of Rules and Policies for the Digital Audio Radio Satellite Service in the 2310-2360 MHz Frequency Band, IB Docket No. 95-91, GEN Docket No. 90-357, RM No. 8610, *Notice of Proposed Rulemaking and Second Further Notice of Proposed Rulemaking* (rel. Dec. 18, 2007) (“Notice”).

## I. Background

More than a decade ago, the SDARS licensees advocated service rules for the operation of “terrestrial repeaters, or ‘gap-fillers’, in urban canyons and other areas where it may be difficult to receive DARS signals transmitted by a satellite.”<sup>3</sup> The Commission determined that such repeaters would be used to “re-transmit the information from the satellite to overcome the effects of signal blockage and multipath interference.” 1995 SDARS Notice, 11 FCC Rcd at 18. The Commission also determined that SDARS repeaters would only be “*complementary to the satellite service,*” and therefore proposed to prohibit the use of terrestrial repeaters “*except in conjunction with an operating satellite DARS system.*” *Id.* (emphasis added). However, the Commission declined at that time to propose rules for terrestrial repeaters, citing the applicants’ failure to provide detailed information on how repeaters would be implemented in the overall satellite system design. *Id.*

Two years later, the Commission adopted general service rules for satellite radio service which enabled the SDARS providers to purchase their licenses at auction and eventually launch service, and sought further comment on the use of repeaters.<sup>4</sup> Subsequently, despite the absence of final repeater rules, Sirius and XM built two national networks of repeaters pursuant to a series of Special Temporary

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<sup>3</sup> Establishment of Rules and Policies for the Digital Audio Radio Satellite Service in the 2310-2360 MHz Frequency Band, *Notice of Proposed Rulemaking*, 11 FCC Rcd 1, 18 (1995) (“1995 SDARS Notice”). The SDARS licensees are Sirius Satellite Radio, Inc. (“Sirius”) (formerly known as Satellite CD Radio, Inc.) and XM Radio Inc. (“XM”) (formerly known as American Mobile Radio Corporation).

<sup>4</sup> 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, 5810-5812 (1997) (“1997 SDARS Order & Further Notice”).

Authorizations.<sup>5</sup> XM currently operates approximately 794 terrestrial repeaters, while Sirius currently operates approximately 124 terrestrial repeaters, with plans to deploy more in 2008.<sup>6</sup>

These figures are particularly significant given the pending merger of XM and Sirius, which if permitted, would allow one entity to control the entire satellite radio industry, including all of the SDARS repeaters in the entire nation.<sup>7</sup> Absent a need to compete against each other to deliver a superior signal, or for subscribers and programming, a combined XM-Sirius may have different needs and incentives for the use of terrestrial repeaters than the SDARS licensees have as separate firms. These new incentives could very well include a heightened desire to offer locally-oriented programming, including local advertisements, which could cripple many local terrestrial broadcasters and hinder their ability to fulfill their obligation to serve the public interest. In this light, it is vital that the Commission adopt final repeater rules that carefully implement its long-held vision of satellite radio service as a national-only service.<sup>8</sup>

In adopting final rules for SDARS repeaters, it is also necessary that the Commission be mindful of the SDARS licensees' record of misbehavior in this area. Both XM and Sirius have confessed to numerous significant violations of the terms and

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<sup>5</sup> See, e.g., XM, Radio., Inc., Application for Special Temporary Authority to Operate Satellite Digital Audio Radio Service Complimentary Terrestrial Repeaters, *Order and Authorization*, DA 01-2172 (September 17, 2001) ("*XM STA Order*"); Sirius Satellite Radio Inc., Application for Special Temporary Authority to Operate Satellite Digital Audio Radio Service Complimentary Terrestrial Repeaters, *Order and Authorization*, DA 01-2171 (September 17, 2001) ("*Sirius STA Order*").

<sup>6</sup> See *supra* note 4.

<sup>7</sup> Public Notice, *XM Satellite Radio Holdings, Inc. and Sirius Satellite Radio Inc. Seek Approval to Transfer Control of Licensee Entities Holding FCC Licenses and Other Authorizations*, MB Docket No. 07-57 (Mar. 29, 2007).

<sup>8</sup> See *infra* page 12.

conditions of the STAs under which the Commission initially authorized (and repeatedly re-authorized) their repeater networks.<sup>9</sup> To NAB's knowledge, enforcement of these violations remains pending at the Commission, and XM has received notice from the Commission that an investigation into XM's repeater failures is underway.<sup>10</sup>

Essentially, both XM and Sirius have sought Commission permission to continue or resume operating hundreds of repeaters that they have operated unlawfully for years.

For instance, among other violations XM has conceded that:

- 19 of XM's repeaters were never authorized at all.
- 142 of XM's repeaters (almost 20% of its total number of repeaters) were deployed at locations that differ by at least five seconds from their FCC authorized locations.
- At least 221 repeaters (almost 28% of XM's total) have been operating at power levels that exceed authorized levels.
- At 21 repeater stations, XM has installed a second or third unauthorized antenna, and at 79 repeater locations, it has installed antennas at heights that exceed authorized levels.

For its part, Sirius revealed problems with 11 of its terrestrial repeaters, stating that with "one exception, the repeaters were placed at locations that differ slightly from the STA – more than half of them within two miles of their reported sites." Sirius STA Request at 2. However, closer examination reveals that of the 11 repeaters in question, 8 are located at least 1.4 miles away from their authorized locations, four are placed at least five miles from their reported locations, and one in Lansing, Michigan was deployed *67 miles away* from its FCC-authorized location. Moreover, neither Sirius nor

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<sup>9</sup> Application for Space Station Special Temporary Authority, XM Radio Inc., File Number SAT-STA-20061002-00114 (filed Oct. 2, 2006) ("XM STA"); Application for Space Station Special Temporary Authority, Sirius Satellite Radio Inc., File Number SAT-STA-20061013-00121 (filed Oct. 13, 2006) ("Sirius STA").

<sup>10</sup> See, e.g., Christopher Stern, XM's Rogue Antennas Amplify Signals, Merger Scrutiny (Update 2), Bloomberg.com, available at <http://www.bloomberg.com/apps/news?pid=20601103&sid=azdBm8rw6BmU&refer=news>.

XM has ever publicly explained why they chose to deploy illegal facilities instead of following the FCC's rules, or why it took them almost five years to disclose these problems.

Given the SDARS licensees' historical failures to comply with their repeater authorizations and other Commission's rules, and the expected negative consumer impact of their pending merger, it is important that the Commission proceed cautiously in adopting final rules by imposing requirements on XM and Sirius as needed with appropriate enforcement mechanisms.

## **II. Discussion**

### **A. Eligibility to Operate SDARS Repeaters**

The Commission seeks comment on whether the SDARS licensees should be able to transmit programming to their repeaters through leased capacity on third parties' satellites that are not licensed for SDARS. Notice at ¶¶ 49-51. Specifically, the Commission asks whether Sirius should be permitted to feed some of its repeaters with transmissions in the Ku band from one or more geostationary FSS satellite(s) that are owned or operated by non-SDARS licensees. In this vein, the Commission also seeks comment on a Sirius application for STA authority to operate terrestrial repeaters in Alaska and Hawaii, where it is largely impossible to receive a signal directly from Sirius' network of satellites. *Id.*

NAB opposes changing the rules of the road for terrestrial repeaters at this late date just because XM and Sirius have failed to install sufficient satellite networks. Doing so would contradict the Commission's long-established purpose for terrestrial

repeaters as “gap-fillers” that must operate in conjunction with an authorized SDARS satellite system that may only operate a national service.

The Commission’s initial authorization of XM and Sirius illuminates the Commission’s intent. In the text of that decision, the Commission sought comment on how best to ensure that “any use of terrestrial repeaters is complementary to the DARS service and is only for retransmission of signals received from *the* satellite.” 1997 SDARS Order & Further Notice, 12 FCC Rcd at 5812 (emphasis added). The plain language of this text obviously refers to *the* SDARS licensee’s satellite, and not just any satellite. Any other interpretation would be absurd, especially since the Commission reinforced the same concept in the specific rule proposed in that decision: “Satellite DARS licensees may construct and operate terrestrial repeaters to retransmit signals received from *their operating DARS satellite(s)*. . .” *Id.* at Appendix C (emphasis added). Subsequently, the Commission again applied this approach, only granting Sirius STAs to operate repeaters for programming that is “transmitted by the satellite directly to SDARS subscribers’ receivers.”<sup>11</sup>

The Commission’s intent is unmistakable, as the Commission carefully linked the use of an SDARS licensee’s repeaters to “their” DARS satellites, and not more generally to any satellites. Nevertheless, the SDARS licensees continue to advocate eliminating this policy, presumably to enable them to establish one or more fully functional, independent terrestrial digital radio networks as a means of reducing their reliance on satellites. Indeed, given the hundreds of repeaters both XM and Sirius have already deployed, the SDARS licensees already may be well down the path of creating just

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<sup>11</sup> Sirius Satellite Radio, Inc., File No. SAT-STA-20010724-00064, Order and Authorization, 16 FCC Rcd 16773, 16777 (2001) (“2001 Sirius STA”).

such a network. The most revealing example of the SDARS licensee's intent regarding repeaters might be Sirius' request for an STA to deploy repeaters in Alaska and Hawaii. As the Commission notes, NAB and the state broadcasters associations in both states, among others, filed petitions to deny this STA application, arguing that the repeaters in this situation are not complementary to a satellite service, and nothing more than stand alone terrestrial facilities.<sup>12</sup>

As a preliminary matter, NAB notes that we wholeheartedly support making every technology and medium for news and entertainment available to all, including satellite radio service to the residents of Alaska and Hawaii, so long as it can be achieved within the Commission's rules. However, we have genuine concerns that Sirius' proposal to deliver service into Alaska and Hawaii violates the Commission's policies governing satellite radio terrestrial repeaters.

First, as discussed above, the Commission has repeatedly emphasized that SDARS repeaters are intended only for the purposes of helping SDARS licensees to deliver service in certain locales where it may be difficult to receive DARS signals transmitted by a satellite because of natural and man-made obstructions. See, e.g., 1997 SDARS Order and Further Notice, 12 FCC Rcd at 5810. Even Sirius supported this approach, stating that repeaters will be complementary to the satellite DARS system and only be used to improve SDARS service in difficult propagation

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<sup>12</sup> Notice at ¶ 50 citing Petition to Deny of the Alaska Broadcasters Association and Hawaii Association of Broadcasters ("AK/HI Broadcasters Petition"), File No. SAT-STA-20061107-00131 (Mar. 19, 2007) ("AK/HI Petition"); Petition to Deny of the National Association of Broadcasters, File No. SAT-STA-20061107-00131 (Mar. 19, 2007) ("NAB Petition").

environments.<sup>13</sup> The Commission therefore specified that SDARS licensees may use repeaters as a means to *improve* SDARS reception, but not as a vehicle to “*extend* a SDARS licensee’s satellite coverage area. *Id.* (emphasis added).

Nevertheless, Sirius has requested authority to operate four terrestrial repeaters in Alaska and Hawaii. Sirius, however, has offered no engineering or technical information to show satellite service in either state that the repeaters could possibly complement, nor and showing of actual subscribers in either state, nor any evidence of signal blockage or interference that they need repeaters to overcome, presumably because no such evidence exists. Thus, Sirius apparently does not seek to improve any existing satellite service within Alaska or Hawaii, but instead to extend the coverage area of its satellite network.

NAB submits that, at a minimum, Sirius’ obligation to use repeaters to deliver “complementary” service should mean that the repeaters in question will be located within the coverage area of the satellite system as authorized by the Commission.<sup>14</sup> However, prior to Sirius’ STA request regarding Alaska and Hawaii, neither Sirius nor the Commission had ever considered Alaska or Hawaii to be within Sirius’ coverage area.<sup>15</sup> Indeed, Sirius provides no appreciable service in either state. Therefore, it is impossible for Sirius to provide service via terrestrial repeaters in Alaska or Hawaii that

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<sup>13</sup> Reply Comments of CD Radio, IB Docket No. 95-91 (filed Oct. 13, 1995) at 54-56.

<sup>14</sup> This view is entirely consistent with the usage of repeaters in other contexts. For example, FM broadcasters are allowed to use boosters (on-channel repeaters) only within their protected contour. 47 CFR § 74.1231(h).

<sup>15</sup> See Application of Satellite CD Radio, Inc. to Modify Authorization to Launch and Operate a Digital Audio Radio Satellite Service, File No. SAT-MOD-1998 1211-00099 (filed Dec. 11, 1998) at A-27 (stating that its two “satellites will be in active service, transmitting to the 48 contiguous United States coverage area at any time.”); Order and Authorization, File No. SAT-MOD-199881211-00099 (March 9, 2001) (finding that Sirius’ system would cover only the coterminous United States).

is “complementary” to satellite service via DARS satellites because there is no service directly from its satellite system to complement.<sup>16</sup>

Sirius’ proposed use of terrestrial repeaters in Alaska and Hawaii also varies substantially from the Commission’s intended technical justification for repeaters. The Commission has specified that the purpose of repeaters is to “transmit the information from the satellite to overcome the effects of signal blockage and multipath interference,” *Id.* at 5810, which typically occur in urban canyons because of buildings, or other locations such as in cars due to mountains, foliage, telephone polls, billboards, and tunnels, among others. However, Sirius here wants to deploy repeaters because Alaska and Hawaii are thousands of miles outside its system’s coverage area, resulting in an extremely low “look angle” and greatly diminished signal strength into both states. In other words, Sirius is interested in using repeaters not to overcome interference caused by buildings, mountains and the like, but to overcome the effect of the curvature of the earth and the antenna patterns of their satellites. This is not what the Commission had in mind when it authorized satellite radio providers to use terrestrial repeaters as a means to improve reception.

XM and Sirius should not be able to circumvent the Commission’s long-held policy that SDARS repeaters must operate in conjunction with an SDARS satellite system. Part and parcel of this policy is preventing SDARS satellites from being fed via non-SDARS satellites, and preventing XM or Sirius from deploying repeaters in

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<sup>16</sup> To the extent that Sirius may have a few customers in Alaska or Hawaii because of incidental reception of service directed to Canada and the continental United States, granting Sirius’ STA request would turn the Commission’s concept of “complementary” on its head. It would more accurate to characterize Sirius’ service from its satellites as complementary to service delivered via the new terrestrial repeaters, instead of other way around.

locations they do not also serve directly from their satellites. Any other approach would make be contrary to the Commission’s well-reasoned prohibition against the transformation of an SDARS repeaters network into an SDARS terrestrial digital radio network.

## **B. Local Programming Origination from SDARS Repeaters**

The Commission seeks to refresh the record regarding whether SDARS licensees should be prohibited from using terrestrial repeaters to transmit locally originated programming. Notice at ¶¶ 55 – 57. NAB believes this question can be easily resolved.

Over ten years ago, the Commission determined that terrestrial radio should not be negatively impacted by the introduction of satellite radio service because, unlike SDARS, terrestrial broadcasting has the ability to provide local news, traffic and weather, local public affairs programming, and other community-responsive programming. 1995 SDARS Notice, 11 FCC Rcd at 3. The Commission also expressed its belief that such local programming “could not practically be provided via satellite DARS.” *Id.* at 6-7. Thus, from the beginning of this rulemaking proceeding, the Commission has progressed pursuant to a tentative conclusion that the SDARS licensees should not, and could not, offer local programming, and this conclusion has been affirmed on multiple occasions by both XM and Sirius.<sup>17</sup>

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<sup>17</sup> See, e.g., Comments of American Mobile Radio Corporation, IB Docket No. 95-91 (Sep. 15, 1995) at 18 (“DARS is a nationwide service that will not carry local news and information”); Comments of CD Radio, Inc., IB Docket No. 95-91 (Sep. 15, 1995) at 73 (“[S]atellite radio is an inherently national service and therefore no offer competitive threat whatsoever to traditional radio stations’ local programming strengths. . . .”).

Indeed, the Commission's initial authorization of SDARS was premised largely on its conclusion that the relationship between SDARS and terrestrial radio would be complementary, rather than competitive. The Commission determined that the latter's advantage in local programming would ensure that a majority of local advertising revenues would continue to flow to terrestrial broadcasters, enabling them to continue providing the valuable public service Americans rely upon.<sup>18</sup> The lynchpin, according to the Commission, was the lack of any "evidence that satellite DARS would be able to compete for local advertising." *Id.*

For these reasons, it was critical for the Commission to ensure the non-local nature of SDARS systems, including authorized SDARS terrestrial repeaters. Therefore, the Commission in 1997 concluded that repeaters must be complementary to SDARS service delivered via SDARS satellites, in order to prevent an SDARS licensee's network of terrestrial repeaters from transforming into an independent terrestrial network. *Id.* The Commission also barred SDARS repeaters from transmitting locally-originated programming because it "*would be inconsistent with the allocation of this spectrum.*" *Id.*, 12 FCC Rcd at 5812 (emphasis added). Moreover, both XM and Sirius have repeatedly promised not to use terrestrial repeaters to deliver local programming.<sup>19</sup> That conclusion was sound then, and remains so today. NAB

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<sup>18</sup> 1997 SDARS Order & Further Notice, 12 FCC Rcd at 5765. NAB hereby incorporates by reference its comments which explain in detail the public interest reasons for authorizing SDARS as a national service that is complementary to local terrestrial broadcasting. For example, see the following submissions of the National Association of Broadcasters in IB Docket No. 95-91: (1) Comments, filed Sep. 15, 1995, at 21-24; (2) Reply Comments, filed Oct. 13, 1995, at 11-32; (3) Comments, filed Aug. 21, 2001, at 12-16; and (4) Comments, filed Dec. 14, 2001, at 3-7.

<sup>19</sup> See, e.g., Comments of Sirius Satellite Radio, Inc., IB Docket No. 95-91, Oct. 13, 1995 at fn. 27 ("In fact, Sirius proposed the rule prohibiting local origination of

submits that any movement towards empowering or enabling XM and Sirius with the ability to compete for local advertising would undermine this core assumption by the Commission. Therefore, all that is left is for the Commission to finally codify accurately crafted language to implement this approach, and properly enforce the restriction.

With this in mind, the Commission in 2001 sought comment on language suggested by XM and Sirius:

SDARS repeaters shall be used only to transmit the complete programming, and only that programming that is also transmitted by an authorized DARS satellite and in such a way that the satellite signal and the terrestrial repeater signal are received nearly simultaneously by SDARS subscriber receivers.<sup>20</sup>

However, this text posed some obvious problems, chief among them that the text does not completely ensure that the same programming is being transmitted at the same time throughout the entire SDARS networks. NAB stated that the terms “in such a way” and “nearly simultaneously” were too vague, and provided too little guidance as to what represents a permissible transmission, or how that transmission must be routed.<sup>21</sup>

Subsequently, NAB and XM jointly recommended alternative language:

SDARS repeaters are restricted to the simultaneous retransmission of the complete programming, and only that programming, transmitted by the satellite directly to the SDARS subscribers’ receivers, and may not be

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programming, which was subsequently echoed by the Commission.”); Comments of CD Radio, Inc. IB Docket No. 95-91, June 13, 1997 at 3 (“Terrestrial devices will not be used to originate programming.... Terrestrial repeaters will not change the essential nature of the satellite DARS service.”).

<sup>20</sup> Public Notice, *Request for Further Comment on Selected Issues Regarding the Authorization of Satellite Digital Audio Radio Service Terrestrial Repeater Networks*, IB Docket No. 95-91, RM No. 8610 (Nov. 1, 2001) (“2001 Public Notice”).

<sup>21</sup> Comments of the National Association of Broadcasters, IB Docket No. 95-91, DA No. 01-2570 (Dec. 1, 2001) (2001 NAB Comments“).

used to distribute any information not also transmitted to all subscribers' receivers."<sup>22</sup>

This agreed-upon text would reaffirm the Commission's long-held vision for SDARS as a national service by ensuring that repeaters are used to retransmit only what is being broadcast by the satellites, with no other input allowed. In addition, the Commission should make clear that broadcasters' concerns regarding the ability of SDARS licensees to offer competitive local programming, including local advertising, are alleviated.

Given that both NAB and XM have agreed to this text, and to NAB's knowledge, this language has governed XM's use of SDARS repeaters since that time, NAB sees no problem with the Commission codifying this language as the final rule. The only caveat that NAB would suggest is that the Commission assure the public that it will carefully monitor and enforce the SDARS licensees' compliance with this and all final repeater rules, especially given their historical pattern and practice of violating the terms and conditions of the STAs governing their terrestrial repeaters.

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<sup>22</sup> Letter from Lon C. Levin, Senior Vice President, XM Radio Inc. and Jack N. Goodman, Senior Vice President & General Counsel, National Association of Broadcasters, to Ms. Marlene Dortch, Secretary, Federal Communications Commission, IB Docket No. 95-91 (Dec. 23, 2003).

For these reasons, NAB respectfully requests that the Commission adopt final repeater rules as suggested herein.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read "Lawrence A. Walke". The signature is written in a cursive, flowing style.

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Dated: February 14, 2008