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FEDERAL COMMUNICATIONS COMMISSION  
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Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554

In the matter of )  
)  
XM RADIO, INC. ) File No. SAT-STA-20010712-00063  
)  
Request for Special Temporary Authority )  
to Operate Terrestrial Repeaters )  
)  
)  
SIRIUS SATELLITE RADIO, INC. ) File No. SAT-STA-20010724-00064  
)  
Request for Special Temporary Authority )  
to Operate Terrestrial Repeaters )

Received  
AUG 23 2001  
Satellite Policy Branch  
International Bureau

**COMMENTS IN OPPOSITION TO GRANT OF STA REQUESTS**

The Wireless Communications Association International, Inc. ("WCA"), by its attorneys and in response to the Commission's July 31, 2001 *Public Notice* soliciting public comment,<sup>1</sup> hereby opposes grant of the above-captioned requests by XM Radio, Inc. ("XM") and Sirius Satellite Radio, Inc. ("Sirius") for special temporary authorization ("STA") to commercially operate networks of terrestrial Digital Audio Radio Service ("DARS") facilities.<sup>2</sup> For the reasons set forth below, WCA submits that neither XM nor Sirius have made the public interest showings necessary under Section 25.120 of the Commission's rules to justify an STA.

As WCA explained in its February 22, 2000 Comments in IB Docket No. 95-91 (in which the Commission is considering the adoption of permanent rules to govern terrestrial DARS repeaters), WCA is the trade association of the fixed wireless broadband industry. Its

<sup>1</sup> "Satellite Policy Branch Information Applications Accepted for Filing," *Public Notice*, Report No. SAT-00077 (rel. July 31, 2001).

<sup>2</sup> Letter from Lon C. Levin, XM Radio, Inc., to Magalie Roman Salas, SAT-STA-20010724-00063, at 2 (filed July 12, 2001)[hereinafter cited as "XM STA Request"]; Robert D. Briskman, Sirius Satellite Radio, Inc., to Magalie Roman Salas, SAT-STA-20010724-00064, at 3 (filed July 24, 2001)[hereinafter cited as "Sirius STA Request"].

members include, among others, a wide variety of Multipoint Distribution Service ("MDS"), Instructional Television Fixed Service ("ITFS") and Wireless Communications Service ("WCS") licensees, wireless cable system operators who utilize MDS and ITFS spectrum to provide video services to subscribing members of the public, and manufacturers of MDS, ITFS and WCS transmission and reception equipment. Several WCA members that hold WCS authorizations (specifically, BellSouth Wireless Cable, Inc., AT&T Wireless Services, Inc., Metricom, Inc. and WorldCom, Inc.) are filing separately to address the procedural defects in the STA requests and the substantial harm that grant of the XM and Sirius STA requests will impose on the WCS community. In the interest of brevity, WCA will refrain from reiterating the arguments of its WCS-licensee-members, and incorporates their views by reference. However, WCA is filing this separate pleading to reaffirm its long-standing position that terrestrial DARS repeaters must operate subject to the same terms and conditions that were imposed on WCS operations in order to protect MDS and ITFS systems.

Before turning to the MDS/ITFS-related issues, WCA must note that the instant STA requests cannot be squared with the clear and unambiguous terms of Section 25.120(b) of the Commission's Rules. That section provides that the Commission may grant an STA only upon a finding that there are "extraordinary circumstances" requiring temporary operations in the public interest, but specifically provides that "marketing considerations of meeting scheduled customer in-service dates, will not be deemed sufficient for this purpose."<sup>3</sup> The only public interest justification that either XM or Sirius has advanced for their STAs is, at bottom, that they want to

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<sup>3</sup> See 47 C.F.R. § 25.120(b).

commence commercial services to subscribers.<sup>4</sup> Similarly, Section 25.120 requires the disclosure of the "full particulars" of the proposed operations. Yet, although both XM and Sirius apparently seek authority to operate numerous repeaters at power levels not exceeding 2,000 watts EIRP, they have failed to provide any specifics regarding where those repeaters will be, the powers at which they will operate, or the antenna systems they will use. Thus, on their faces neither STA request meets the fundamental requirements that extraordinary circumstances be demonstrated and full particulars disclosed. These particulars must be provided before the Commission can even consider a grant of the instant STA requests.

The DARS terrestrial repeaters contemplated by Sirius and XM will operate in the 2320-2345 MHz band, directly between the 2305-2320 MHz and 2345-2360 MHz bands allocated to the WCS. When it adopted the Part 27 rules that govern WCS, the Commission recognized that terrestrial WCS operations in the 2305-2320 MHz and 2345-2360 MHz bands could pose a substantial threat of interference to MDS/ITFS operations, and imposed a series of power limits, notice requirements, and equipment replacement rules to minimize that risk of interference.<sup>5</sup> The WCS power limitation was a direct result of evidence WCA presented to the Commission that, absent a limit on WCS EIRP, brute force overload interference would be caused to the subscriber equipment that had been widely deployed for use in MDS/ITFS systems.<sup>6</sup> The Commission agreed with WCA, holding that:

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<sup>4</sup> See XM STA Request, at 2; Sirius STA Request, at 2.

<sup>5</sup> See *Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service ("WCS")*, 12 FCC Rcd 3977 (1977) [hereinafter cited as "*WCS Reconsideration Order*"].

<sup>6</sup> See *Petition for Expedited Reconsideration of the Wireless Cable Association International, Inc.*, GN Docket 96-228 (filed Mar. 10, 1997).

After careful consideration of this issue, we find that the public interest will be best served by setting limits on WCS operating power. We will therefore restrict WCS fixed, land and radiolocation land stations to 2,000 watts peak EIRP and WCS mobile and radiolocation stations to 20 watts EIRP. Setting maximum power levels on WCS operations will provide MDS/ITFS equipment manufacturers and service providers with the necessary certainty regarding the potential WCS environment to enable them to design and purchase more robust receiving installations, including better designed downconverters.<sup>7</sup>

The Commission also recognized that limiting WCS operations to a maximum of 2,000 watts peak EIRP did not provide complete interference protection to existing MDS and ITFS installations. To the contrary, the Commission

agree[d] with WCA that MDS/ITFS equipment that was designed to operate in a pre-WCS environment should be afforded some degree of protection from interference. The introduction of possibly a large number of transmitters in WCS spectrum will increase the potential for interference to existing MDS/ITFS receivers that were designed with different expectations about the extent and nature of use of nearby bands.<sup>8</sup>

As a result, the Commission found that "it is appropriate and equitable to shift to WCS licensees some of the cost and responsibility for remedying interference to MDS/ITFS operations."<sup>9</sup>

Specifically, the Commission required that each WCS licensee would be required to provide neighboring MDS/ITFS licensees advance notice before commencing operations, and required each WCS licensee to bear the full cost of replacing an MDS/ITFS downconverter when: (1) the interference complaint is received by the WCS licensee prior to February 20, 2002; (2) the MDS/ITFS downconverter was installed prior to August 20, 1998; (3) the WCS operation transmits at 50 or more watts EIRP; (4) the MDS/ITFS downconverter is located within a WCS

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<sup>7</sup> *WCS Reconsideration Order*, 12 FCC Rcd at 3983-84.

<sup>8</sup> *Id.* at 3984.

<sup>9</sup> *Id.*

transmitter's  $-34$  dBW/m<sup>2</sup> power flux density contour; and (5) the MDS/ITFS customer or licensee has informed the WCS licensee of the interference within one year from the initial operation of the WCS transmitter or within one year from any subsequent power increase.<sup>10</sup>

There is no doubt that high-power terrestrial DARS operations pose the same threat to MDS/ITFS as WCS did. Indeed, the record in IB Docket No. 95-91 is devoid of any meaningful distinction between the brute force overload interference threat posed by WCS and that posed by terrestrial DARS repeaters.<sup>11</sup> To the contrary, even Sirius has conceded in a January 2000 filing in IB Docket No. 95-91 that terrestrial DARS operations "would be likely to cause overload of the MDS downconverters" at receive locations within 2048 meters of a terrestrial repeater.<sup>12</sup> And even XM has conceded that the 2,000 watt EIRP limitation designed to avoid interference is "completely standard" in the band.<sup>13</sup>

Because terrestrial DARS repeaters in the 2320-2345 MHz band pose essentially the same risk of interference as did WCS terrestrial operations in the 2305-2360 MHz band, WCA's consistent position in IB Docket No. 95-91 has been that similar rules (albeit adjusted to reflect that terrestrial DARS operates on narrower bandwidths than WCS) must be applied to terrestrial

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<sup>10</sup> 47 C.F.R. § 27.58 (a).

<sup>11</sup> Ironically, Sirius attempted last year to convince the Commission that WCS and terrestrial DARS differed because "satellite DARS terrestrial repeaters have a more limited coverage than WCS or MDS systems . . ." Sirius Supplemental Comments, IB Docket No. 95-91, at 12 (filed Jan. 13, 2000). Now that the XM and Sirius STA requests provide the Commission with its first glimpse of the scale and scope of terrestrial DARS deployment, it can be seen with crystalline clarity that the terrestrial DARS networks hardly have the limited coverage promised by Sirius. To the contrary, terrestrial DARS has evolved from small "gap fillers" to high power stations designed to blanket markets with a broadcast-like signal. As such, it is impossible to find any meaningful distinction between the propensity of terrestrial DARS and WCS to cause brute force overload interference to MDS/ITFS receivers.

<sup>12</sup> See Sirius Reply Comments, Exhibit 2, at 9-10.

<sup>13</sup> Letter from Bruce D. Jacobs to Magalie Roman Salas, IB Docket No. 95-91, at 2 (filed April 25, 2001).

DARS repeater operations in the 2320-2345 MHz band.<sup>14</sup> Specifically, WCA has urged the Commission (1) to protect MDS/ITFS reception by limiting terrestrial DARS repeaters to 400 watts/MHz (the same 2,000 watts EIRP limit as is applied to fixed WCS operations, but adjusted to reflect bandwidth differences); (2) to require notice to nearby MDS and ITFS licensees before a terrestrial DARS repeater commences transmissions; and (3) to impose on terrestrial DARS licensees the same obligation to replace MDS/ITFS downconverters as has been imposed on WCS licensees.<sup>15</sup>

Despite the fact that WCA's proposals have been a matter of record in IB Docket No. 95-91 since before XM and Sirius secured the authorizations for "experimental" stations they now seek to operate commercially,<sup>16</sup> neither XM nor Sirius have made any attempt to tailor their STA requests to address WCA's concerns. To the contrary, without any discussion whatsoever of the brute force overload issue, Sirius and XM would have the Commission ignore the power limits imposed on WCS stations (as well as the similar power limits on MDS and ITFS stations) by

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<sup>14</sup> See WCA Comments, at 2-6.

<sup>15</sup> See *id.* at 5-6.

<sup>16</sup> WCA is troubled that XM and Sirius both have utilized experimental authorizations to construct and test nationwide networks of terrestrial facilities that are intended for commercial operations. While WCA recognizes that there may have been some use of some of these facilities that fell within the scope of experimental use permitted under Section 5.3 of the Commission's rules, it is inconceivable that all of these facilities were necessary for XM and Sirius to perform the type of testing Part 5 experimental authorizations are intended to promote. While the Commission has gone to great lengths in the past to assure that the experimental license process is not abused, the fact that XM and Sirius were able to secure experimental authorizations permitting nationwide deployment of terrestrial networks suggests a serious flaw in the Commission's processes.

Moreover, as the Commission considers the STA requests, it must not forget that experimental authorizations are granted with the express understanding that the authorization confers no right to continuing operation and no assurance that commercial use will be authorized. See 47 C.F.R. § 5.83. Thus, XM and Sirius cannot be heard to claim that they have some sort of protected expectation that their experimental facilities will be authorized to operate on a commercial basis. They knowingly took the risk of constructing high-power repeater facilities despite the record opposition to such facilities, and cannot complain if the FCC refuses to permit the commercial operation of such experimental facilities.

authorizing the commercial operation of almost 900 repeaters operating at power levels in excess of 2,000 watts EIRP (778 high-power repeaters proposed by XM and 104 high-power repeaters proposed by Sirius).<sup>17</sup> Moreover, Sirius and XM would have the Commission authorize operations of those facilities, as well as an indeterminate number of repeaters operating at 2,000 watts EIRP or less, without imposing the same notice or equipment replacement conditions WCS licensees have readily accepted to protect the MDS and ITFS community.

Admittedly, each of the STA requests includes boilerplate language to the effect that the applicant will cease operations of any repeater upon receipt of notice of interference.<sup>18</sup> Quite frankly, WCA fears that such relief will prove elusive. WCA is concerned that in cases where a terrestrial DARS repeater operated under an STA is suspected of causing brute force overload, XM and Sirius will not cease operations upon receipt of a complaint, but instead will force MDS and ITFS licensees to seek a costly, time-consuming Commission decision ordering cessation (all while interference to the MDS/ITFS station is occurring). This concern is rooted in the efforts by XM and Sirius in IB Docket No. 95-91 to avoid meaningful liability to the MDS and ITFS community for interference caused by terrestrial repeaters,<sup>19</sup> as well as their more recent

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<sup>17</sup> See XM STA Request, at Exhibit A; Sirius STA Request, at 1.

<sup>18</sup> XM STA Request, at 2; Sirius STA Request, at 3.

<sup>19</sup> Initially, both XM and Sirius fought the imposition of any liability to MDS and ITFS stations for curing brute force overload interference. See Reply Comments of Sirius, IB Docket No. 95-91, at 10 (filed March 8, 2000); Reply Comments of XM, IB Docket No. 95-91, at 14 (filed March 8, 2000). More recently, the rhetoric from the DARS camp has cooled somewhat, as Sirius and XM have proposed to be governed by watered-down versions of Section 27.58. See Letter from Carl R. Frank, Counsel to Sirius, to Magalie Roman Salas, IB Docket No. 95-91, at Exhibit 1 (filed April 23, 2001); Letter from Bruce D. Jacobs, Counsel to XM, to Magalie Roman Salas, IB Docket No. 95-91, at Exhibit 1 (filed April 25, 2001). However, the proposals they have advanced are far from adequate, as they provide MDS and ITFS operations far less protection than afforded against WCS. To cite just a few of the flaws in the rules proposed by XM and Sirius:

- While Section 27.58 mandates that the WCS licensee cure any brute force interference at the WCS licensee's full cost, XM and Sirius would merely require the interference-causing DARS licensee to

claims that once they commence operations at high power levels, they cannot decrease power to avoid interference.<sup>20</sup> Thus, at a bare minimum, the Commission must make clear to XM and Sirius that if an MDS or ITFS licensee notifies them of suspected interference due to brute force overload caused by a terrestrial DARS repeater, the offending repeater must cease operating until it is agreed by the affected parties either that the terrestrial DARS repeater is not the cause of the interference or that the terrestrial DARS licensee has taken appropriate steps to cure the interference. In addition, any STA grant should be conditioned on requiring XM and Sirius to provide all neighboring MDS and ITFS licensees 30 days advance notice of the technical parameters of all terrestrial repeaters (not just those operating above 2,000 watts EIRP) in the same fashion that WCS licensees are obligated to give advance notice pursuant to Section 27.58. Such a condition is necessary to assure that MDS and ITFS licensees will be aware in advance of the increased potential for brute force overload interference and will be able to trace any new or

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reimburse the MDS/ITFS licensee for the cost of a bandpass or bandstop filter. Neither provides for reimbursement of the cost of installing that filter, or for further remedial efforts if such a filter is ineffective in curing the interference.

- The DARS-proposed rules would exempt terrestrial DARS licensees from curing brute force interference caused by repeaters operating at between 50 and 2,000 watts EIRP, despite the fact that WCS licensees are required by Section 27.58 of the Commission's rules to cure brute force overload interference at such power levels.
- While Section 27.58(c) provides for WCS licensees to share the cost of curing brute force overload at MDS and ITFS receive sites, XM and Sirius have drafted their proposed rules in such a way that they are not required to make any financial contribution even in cases where they are partially responsible for the interference.
- XM and Sirius would limit their cumulative liability to \$500,000 each, a number that they have apparently pulled from thin air and that has no relation to the costs that could be incurred by the MDS and ITFS communities due to DARS-caused brute force overload interference.

These loophole-ridden proposals make clear that, unlike WCS licensees, XM and Sirius are not serious about assuming their fair share of the cost of curing brute force overload interference.

<sup>20</sup> See Letter from Jennifer D. Hindin, Counsel to Sirius, to Magalie Roman Salas, IB Docket No. 95-91 (filed July 31, 2001); Letter from Lon C. Levin, XM, to Donald Abelson and Thomas Sugrue, IB Docket No. 95-91, at 7 (filed Aug. 7, 2001).



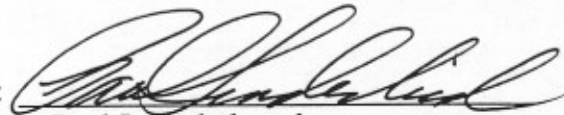
increased interference to the appropriate terrestrial repeater. Absent these two conditions, the Commission will be putting in jeopardy existing, *licensed* service to MDS/ITFS subscribers for the benefit of those who have chosen to construct terrestrial repeater facilities at their own risk prior to the adoption of final rules and licensing.

To summarize, neither XM nor Sirius has met the requirements of Section 25.120 that there be extraordinary circumstances unrelated to consumer demand for a service in order to justify an STA, and that the full particulars of the proposed operations must be disclosed. Thus, on their faces the STA requests are defective and should be denied. Should, however, XM and Sirius cure these fundamental flaws, any grant must be conditioned as proposed above to assure that MDS and ITFS licensees receive no less protection from terrestrial DARS than they do from WCS.

Respectfully submitted,

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August 21, 2001

## CERTIFICATE OF SERVICE

I, Anna Lee Silver, hereby certify that the foregoing Comments in Opposition to STA Requests was served this 21st day of August 2001 by depositing a true copy thereof with the United States Postal Service, first-class postage prepaid, addressed to the parties listed below:

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