

May 13, 2010

Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 Twelfth Street, SW  
Washington, DC 20554

Re: *Re: Amendment of Part 27 of the Commission's 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) -- WRITTEN EX PARTE PRESENTATION*

Dear Ms. Dortch:

Earlier today, Sirius XM Radio Inc. ("Sirius XM") submitted two filings that make a variety of new substantive proposals for consideration by the Commission in these proceedings. I am writing on behalf of the WCS Coalition in response.

Because the Commission is expected to release its "sunshine agenda" for its May 20, 2010 open meeting today, and that agenda is expected to include consideration of these proceedings, the WCS Coalition cannot possibly respond in full to Sirius XM's latest filings before the deadline for *ex parte* submissions. Sirius XM does not even attempt to explain why its latest substantive proposals were not made in timely fashion in response to the Commission's two recent public notices, and the WCS Coalition can only speculate as to why these new proposals were withheld until the eleventh hour.<sup>1</sup>

Be that as it may, the objective of Sirius XM's newly-proposed rules is clear – to render WCS a secondary service, consigned to accept whatever interference Sirius XM throws its way while obligated to make whatever sacrifices are necessary to assure that no SDARS subscriber ever suffers even unperceivable interference. For the Commission to do so, however, would be to undermine the balance that was crafted between WCS and SDARS when the two service were created in 1997. As we have had to remind Sirius XM countless times in this proceeding, when the Commission established WCS it made clear that the desire for a high quality SDARS must

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<sup>1</sup> See FCC Public Notice, *Commission Staff Requests That Interested Parties Supplement the Record on Draft Interference Rules for Wireless Communications Service and Satellite Digital Audio Radio Service*, DA No. 10-592 (rel. Apr. 2, 2010); FCC Public Notice, *Federal Communications Commission Requests Comment on Revision of Performance Requirements for 2.3 GHz Wireless Communications Service*, FCC 10-46 (rel. Mar. 29, 2010).

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“be balanced with the need to provide reasonable operating parameters for adjacent services” and thus the Commission’s objective in governing WCS must be “to limit the potential for interference to a reasonable level -- not to provide a pure, interference-free environment.”<sup>2</sup> Not surprisingly, then, the 2007 *Notice of Proposed Rulemaking and Second Further Notice of Proposed Rulemaking* in these proceedings makes clear that the Commission’s goal at this juncture is to craft rules “that would allow SDARS terrestrial repeaters and WCS operation to coexist in adjacent bands.”<sup>3</sup> Yet, the proposals now being advanced by Sirius XM ignore the Commission’s stated objectives, to the detriment of a public that is demanding ever-expanding access to the wireless broadband services WCS can offer.

Make no mistake, adoption of the proposals Sirius XM is advocating would add so much additional “hair” to WCS spectrum that the prospects for viable wireless broadband service would greatly diminish.<sup>4</sup> For example, as was explained in a filing made yesterday by Horizon

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<sup>2</sup> *Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service (“WCS”), Memorandum Opinion and Order*, 12 FCC Rcd 3977, 3991 (1997).

<sup>3</sup> *Amendment of Part 27 of the Commission’s Rules to Govern the Operation of Wireless Communications Services in the 2.3 GHz Band; Establishment of Rules and Policies for the Digital Audio Radio Satellite Service in the 2310-2360 MHz Frequency Band*, Notice of Proposed Rulemaking and Second Further Notice of Proposed Rulemaking, 22 FCC Rcd 22123, 22146 (2007) *See also id.* at 22124.

<sup>4</sup> In support of its proposals, Sirius XM cites to a study prepared by Dr. Dr. Theodore S. Rappaport, P.E. (the “Rappaport Study”) that purports to demonstrate that “that the adoption of the staff’s proposed Part 27 rules would result in crippling interference to satellite radio operations in an unacceptable number of cases.” Supplemental Comments of Sirius XM Radio Inc., IB Docket No. 95-91 and WT Docket No. 07-293, at 1-2 (filed April 29, 2010). Despite its length, however, the Rappaport Study fails to disclose materials details regarding the computer modeling on which it based, and thus it cannot be relied on as evidence of anything.

Perhaps most significantly, the Rappaport Study appears to substantially exaggerate the number of SDARS subscribers that will be listening to satellite radio at any given time, thus overstating the potential for interference to any listener at any given time. There appear to be two fundamental problems. First, the Rappaport Study assumes, based on information provided by Sirius XM, that by 2015 80 million vehicles, 34% of those expected to be on the road, will be equipped to receive a satellite radio service. *See Rappaport Study* at 28 n. 58, 39, 41. The WCS Coalition has no basis for commenting on that assumption. However, the Rappaport Study does not appear to have discounted that figure to account for the fact that not all satellite radio equipped cars will necessarily be Sirius XM subscribers in 2015. According to Sirius XM’s latest filing with the Securities and Exchange Commission, is has less than 19 million subscribers today (but that figure includes subscribers to its Internet services that presumably do not receive satellite service. It is not realistic to assume that this figure will grow to 85 million in five years, particularly not given its slow rate of growth of late and the likelihood that consumers will be abandoning Sirius XM for services, like Pandora and Slacker, available over mobile broadband connections. Yet, the Rappaport Study appears to presume this more than 400% increase in satellite radio subscribership, as it constantly references a 34% satellite penetration rate without applying a discount to account for the majority of owners of satellite radio equipped vehicles who elect not to subscriber to Sirius XM.

The Rappaport Study also assumes that each Sirius XM subscriber will be listening to satellite radio 85% of the time he or she is in the vehicle. Yet, as a footnote to the Rappaport Study concedes, a 2009 study trumpeted by Sirius XM showed that its subscribers listen 71% of the time. *See id.* at 34 n. 64. While the Rappaport Study attempts to

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Wi-Com, LLC, Sirius XM's proposal for the Commission to preclude WCS mobile devices from transmitting during the portion of every other frame allocated for mobile transmissions mischaracterizes a prior WCS Coalition statement, misrepresents the open and transparent live WiMAX testing that the WCS Coalition demonstrated in Ashburn, VA to the Commission and Sirius XM, is unnecessary to provide Sirius XM subscribers with protection, is unsupported by any 4G standard or by any technology available in the marketplace, and, as a result, likely would effectively preclude the use of WCS for viable wireless broadband services.<sup>5</sup>

Moreover, if WCS licensees are required to give 180 days advance notice prior to deploying new base stations, they will be incapable of responding within the time frames demanded by the marketplace, particularly as dead zones within existing markets are identified. Not surprisingly, however, Sirius XM is proposing that it be exempt from providing any advance notice of the location of its terrestrial repeaters – repeaters that can operate at far higher power levels than WCS base stations and are likely to cause new service dead zones to which WCS licensees will have to adjust. The imbalance in this approach is patent -- to the extent that the WCS licensee concludes a new base station is required to address interference from a new Sirius XM repeater of which it had not prior notice, the WCS licensee would have to give Sirius XM 180 days advance notice before deployment. During that 180 day period, WCS subscribers would suffer interference to, if not complete loss, of their wireless broadband service. This hardly seems like the sort of "fair and balanced" set of rules that Sirius XM has claimed to desire.

Finally, but perhaps most importantly, Sirius XM conveniently ignores that WCS licensees are free today to deploy a wide range of facilities in their band, without prior notice to or coordination with Sirius XM, and without the onerous, one-sided interference mitigation obligations that Sirius XM is attempting to impose here. While Sirius XM now proposes that

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explain away this disparity, suggesting a 20% increase in the listening ratio appears excessive and skews the results to show interference that will not occur.

Other potential flaws include: (a) the model overestimates by 25-50% the likely number of WCS subscribers and appears to wrongly assume that all WCS usage will be in vehicles, overstating the number of interfering sources that will be on a road segment at a given time; (b) the simulation does not appear to account for the reduction in OOB that occurs when transmit power control reduces the transmit power of mobile devices, and thus exaggerates the level of OOB that will actually be received by SDARS receivers; (c) the simulation employs an unrealistic path loss model that understates attenuation between a potentially interfering WCS mobile and a SDARS receiver, thus overstating number of cases where interference is predicted to occur; (d) the model deems a SDARS receiver to have suffered interference even if interfering signal does not result in signal muting; (e) road segments chosen for modeling were not materially served by SDARS terrestrial repeaters (which largely immunize SDARS from OOB interference); and the results are not applicable to roads covered by robust terrestrial repeater network; and (f) the simulation only considers potential impact to the old XM system, and the results cannot necessarily be applied to the former Sirius system.

<sup>5</sup> See Letter from Thomas Gutierrez, Counsel to Horizon Wi-Com, LLC, to Marlene H. Dortch, FCC Secretary, WT Docket No. 07-293 and IB Docket No. 95-91, Attachment (filed May 12, 2010).

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WCS should be deemed to cause interference to Sirius XM's service (and be responsible to cure that interference) if availability of satellite radio is impacted 0.3%, Sirius XM has never shown that it is immune to such levels of interference from the facilities that WCS licenses are authorized to construct under the current rules. Indeed, the record in this proceeding suggests that at least certain satellite radio receivers have been poorly designed, making them vulnerable to interference from service offerings that WCS can provide under the current Part 27 rules. While WCS licensees should be responsible for resolving harmful electrical interference resulting from the rule changes, Sirius XM should not be immunized from its own system design decisions that rendered its service vulnerable to interference under the existing rules.

Pursuant to Sections 1.1206(b)(2) and 1.49(f) of the Commission's Rules, this letter is being filed electronically with the Commission via the Electronic Comment Filing System. Should you have any questions, please contact the undersigned.

Respectfully submitted,

/s/ Paul J. Sinderbrand

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Counsel to the WCS Coalition

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