

Proposed Modification
Call Sign WI2XJC

Sirius XM Radio Inc. (“SiriusXM”) seeks to modify its experimental radio license issued under Call Sign WI2XJC. Specifically, SiriusXM requests authority to add two locations to the license to further experiment with the feasibility of using low power terrestrial repeaters to mitigate interference, including authority to conduct a product development trial at the new locations.

In the application for Call Sign WI2XJC (the “Initial Application”), SiriusXM sought authority to experiment with a new low power terrestrial repeater (“Spot Repeater”) to determine whether the repeater would effectively mitigate interference to SiriusXM satellite radio subscribers created by wireless transmissions. SiriusXM explained that it is researching methods to resolve intermodulation interference to its Satellite Digital Audio Radio Service (“SDARS”) receivers caused by nearby base stations operating on both Advanced Wireless Services (“AWS”) and Personal Communications Service (“PCS”) spectrum. The license for WI2XJC authorizes SiriusXM to test Spot Repeaters within a 97 kilometer radius of six different locations. SiriusXM has begun conducting testing of Spot Repeaters and continues to develop a further understanding of the potential uses of such repeaters for interference mitigation.

In addition to addressing intermodulation interference, the Initial Application stated “[t]he use of Spot Repeaters may also be a valuable tool to address interference concerns as AT&T Inc. and its affiliates (“AT&T”) – the primary license holder in the adjacent Wireless Communications Service (“WCS”) band – deploys facilities and begins operations in that band.” The Spot Repeaters are intended to improve subscribers’ reception of SiriusXM services where muting is caused by interference from nearby wireless transmissions while facilitating broadband providers’ ability to optimize use of their spectrum for wireless broadband operations. The Commission is well aware of the continuing efforts made by SiriusXM and AT&T to address interference into the satellite radio band, including the possibility of co-locating terrestrial repeaters at WCS transmission sites as part of these efforts.¹ SiriusXM included with the Initial Application a letter from AT&T indicating its support of the proposed experiments.

In the instant modification application, SiriusXM seeks to add two additional locations, each with an authorized 97 kilometer radius of operation, in the areas around Dallas-Ft. Worth, Texas and Kansas City, Missouri, to experiment with the use of Spot Repeaters to address interference from the WCS band at these locations and others currently authorized under the WI2XJC license. SiriusXM will, similar to its experiments near AWS/PCS base stations, experiment with using the Spot Repeaters to raise its signal levels near WCS base stations in order to mitigate interference to SDARS receivers while enabling improved wireless broadband service.

The Spot Repeaters operating under the modified license will operate with the same technical parameters as authorized under the existing license, including frequencies, RF emission characteristics, and out-of-band emission limits proposed in the Initial Application. Initial testing

¹ See Sirius XM Radio Inc. *Written Ex Parte Presentation*, WT Docket No. 07-293 (Feb. 14, 2017).

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and operations under the modified license will be conducted in conjunction with AT&T to evaluate the effectiveness of these Spot Repeaters to mitigate interference from WCS facilities, but SiriusXM will nonetheless maintain control and responsibility for the repeaters in compliance with the WI2XJC license. The repeaters in the new locations will be used to deliver redundant services to SiriusXM subscribers to determine whether and how the repeaters are improving SDARS reception in the presence of potentially interfering signals. However, just as with SiriusXM's existing operations under the WI2XJC license, subscribers will be unaware of the use of the Spot Repeaters and no subscriber shall be charged any fees associated directly with the Spot Repeaters. In the Initial Application, SiriusXM noted that some Spot Repeaters may be fed via Internet Protocol ("IP") delivery rather than directly by satellite. SiriusXM anticipates the Spot Repeaters operating under the modified license may, as an alternative to using IP or satellite, receive signals from other terrestrial repeaters in the SiriusXM network during the experiment.

In sum, SiriusXM has been successfully conducting experiments under Call Sign WI2XJC and wishes to expand those experiments to two additional locations and to focus additional experiments at these locations, as well as the currently authorized locations, primarily on mitigating interference from transmissions in the WCS band (while continuing experimentation with mitigating intermodulation interference from AWS/PCS stations at the currently authorized locations and potentially the additional locations as well). SiriusXM submits that the proposed modification will further the public interest, as well as the Commission's interests in ensuring that adjacent and proximate channel licensees are able to operate without interference and helping to optimize wireless broadband operations.