

DESCRIPTION OF APPLICATION

By the attached FCC Form 442, Rainbow MVDDS Company, LLC (“Rainbow”) seeks authorization pursuant to Part 5 of the rules and regulations of the Federal Communications Commission (“FCC” or “Commission”) to test facilities designed to provide multichannel video and data delivery services (“MVDDS”).

As the Commission is aware, Rainbow is an attributable interest holder in DTV Norwich, LLC (“DTV”), which was a winning high bidder in the recently concluded auction for MVDDS spectrum.^{1/} In support of DTV’s upcoming provision of MVDDS service, Rainbow wishes to test equipment produced by MDS America (“MDS America”) designed to provide MVDDS service in the 12.2-12.7 GHz band (the “MVDDS Band”).^{2/} Although DTV expects to secure authorization to provide MVDDS service in due course, this authorization for experimental operations is required because the equipment proposed for testing is not yet approved for use under Subpart J of Part 2 of the FCC’s rules.^{3/}

Pursuant to the provisions of Section 5.63 of the FCC’s rules and Section 7 of the attached application, Rainbow provides the following information:

1. The complete program of research and experimentation proposed; description of equipment and theory of operation.

Rainbow will employ the experimental authorization to continue to assess the performance of MVDDS equipment in advance of commercial launch of MVDDS service. As the FCC is aware, it previously granted MDS America experimental authorization (call sign WC2XPU) to conduct research regarding the use of MVDDS equipment and, among other things, its impact on the reception of direct broadcast satellite (“DBS”) services. MDS America’s tests were conducted

^{1/} See, *Multichannel Video and Data Service Spectrum Auction Closes; Winning Bidders Announced*, DA04-215 (February 2, 2004).

^{2/} Rainbow will initially test MDS America equipment. Rainbow expects that, in due course, it will wish to test MVDDS equipment produced by other manufacturers. If permitted, Rainbow will test that other equipment under the terms of this experimental authorization. However, to the extent required, Rainbow will seek amended authorization to test additional equipment.

^{3/} As noted in DTV’s application for MVDDS licenses, Rainbow is currently owned by Cablevision Systems Corporation (“Cablevision”), a cable television operator in the New York City area. Because no commercial operations (*i.e.*, provision of service to customers or potential customers) will be conducted under this experimental license, however, the MVDDS/cable cross-ownership limitations are not implicated by the grant of this experimental license.

principally in rural areas in Florida, with little change in elevation throughout the covered area. The tests proposed by Rainbow will be conducted in the more populated area of Long Island, New York – an area with more varied terrain -- in order to better gauge the impact of MVDDS operations on DBS systems in real-world circumstances.

In addition, unlike the comparatively constant weather conditions under which MDS America conducted its tests, Rainbow proposes to conduct operations for approximately six months, beginning on July 1, 2004 and ending on December 31, 2004, in order to assess the operation of the MDS America equipment under a variety of weather and foliage conditions.

Rainbow seeks authority to employ two types of transmitting antennas (not simultaneously). Using an omnidirectional antenna, the experimental transmitter will operate with a power level of .0024 watts at the antenna site indicated on the attached Form 442. Based on an anticipated antenna gain of 8 dBi, Rainbow anticipates that the effective radiated power of the transmitter using an omnidirectional antenna will be .015 watts, as indicated on the Form 442. Using a directional antenna, the experimental transmitter will operate with a power level of .00025 watts at the antenna site indicated on the attached Form 442. Based on an anticipated antenna gain of 17.4 dBi, Rainbow anticipates that the effective radiated power of the transmitter using a directional antenna will be .015 watts, as indicated on the Form 442. In connection with the MDS America transmitters, Rainbow will use the Planar 540 MDS America receiver, which receives signals in the band 11.7-12.75 GHz.

Rainbow will test the MDS America system in and around Selden, New York. It will employ the services of Comsearch, an internationally recognized independent expert in wireless engineering services, to conduct the tests. MVDDS receive stations will be located at various homes nearby to the proposed transmitter site to monitor reception and signal strength. In addition, Comsearch personnel will travel in a vehicle with a mounted MVDDS receiver to various points from the transmitter site to monitor signal strength at those distances. Signals will be transmitted in omnidirectional and directional patterns. The additional operational parameters of the proposed system are specified in the attached FCC Form 442. Radiation patterns of the proposed antennas are attached to this exhibit.

2. Specific objectives sought to be accomplished.

The testing proposed in this application will enable DTV to design MVDDS systems that provide the best possible service to potential customers with as little impact as possible to DBS receivers and Non-Geostationary Satellite Orbit Fixed Satellite Service (“NGSO FSS”) and Fixed Service (“FS”) operations. As the Commission is aware, its rules require that MVDDS licensees cause no harmful interference to these co-channel and adjacent channel licensees. By assessing the performance of MDS America equipment now, Rainbow can determine the circumstances under which interference may be caused to other licensees. Doing so will allow DTV to avoid, when it introduces commercial services, disruptions to the service it will provide to its customers based on the need to eliminate interference to DBS subscribers. The operations that Rainbow expects

to conduct will demonstrate the viability for using the MDS America equipment to deliver broadband services to mock customer locations, via both line-of-site and near-line-of-site methods.

3. How the program of experimentation has a reasonable promise of contribution to the development, extension, expansion or utilization of the radio art, or is along lines not already investigated.

The proposed program of experimental operation holds great promise to contribute, develop, extend and expand the proposed use of MVDDS systems.^{4/} There are no commercially available MVDDS systems today. By permitting Rainbow to test this equipment, the FCC will permit an affiliate of a putative licensee to begin assessing the best way to serve customers, while limiting the potential for interference to DBS operations. MDS America has already tested its equipment; the tests proposed by Rainbow are designed to further refine those test results and assess the performance of that equipment in more populated areas, with more varied terrain, under a wider range of atmosphere and foliage conditions.

Protection of Co-Channel and Adjacent Channel Operations

As noted above, Rainbow is mindful that the FCC's rules governing the operation of MVDDS systems are designed to protect DBS, NGSO FSS and FS operations. Rainbow will operate the proposed MVDDS transmitters with very low output power (.0024 watts with an omnidirectional antenna and .00025 with a directional antenna) and effective radiated power (.015 with either an omnidirectional or directional antenna). Therefore, it is unlikely that Rainbow will cause any harmful interference to DBS, NGSO FSS or FSS licensee. MDS American, operating under with similar technical parameters experienced no complaints of harmful interference. In any case, Rainbow does not propose to initiate commercial operations, and it hereby voluntarily agrees to comply with the technical standards contained in Subpart C of Part 101 of the FCC's rules. In addition, Rainbow is aware that in issuing experimental authorizations to MDS America, the FCC imposed certain conditions on MDS America in order to protect DBS operations. Rainbow is willing to comply with similar conditions.

Should there be any questions regarding the application, the FCC is asked to contact counsel for Rainbow, Russell Fox of Mintz, Levin at 202-434-7483 or rfox@mintz.com.

^{4/} These tests are designed to validate the FCC's expectations that MVDDS will likely be used for the delivery of video services as well as one-way high speed data (nonvideo) services. *See, Amendment of Parts 2 and 25 of the Commission's Rules to Permit Operation of NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems in the Ku-Band Frequency Range*; First Report and Order and Further Notice of Proposed Rule Making, 16 FCC Rcd 4096 (2000) at ¶ 289.