

June 25, 2009

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*Via Hand Delivery*

FILED/ACCEPTED

JUN 25 2009

Federal Communications Commission  
Office of the Secretary

Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12th Street, S.W.  
Washington, DC 20554

**Re: MDS Operations, Inc.  
Superseding Petition for Rule Waiver  
Multichannel Video Distribution and Data Service Station WQAR561,  
Albuquerque-Santa Fe DMA  
WT Docket No. 07-255**

Dear Ms. Dortch:

Transmitted herewith, on behalf of MDS Operations, Inc., please find the original and four (4) copies of the above-referenced Superseding Petition for Rule Waiver.

Enclosed please also find an extra copy of the Petition. Kindly date-stamp that copy and return it to our courier, who is waiting.

If you have any questions or require additional information concerning this matter, kindly contact the undersigned.

Sincerely,

  
Frederick M. Joyce

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**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

**FILED/ACCEPTED**

**JUN 25 2009**

*Federal Communications Commission  
Office of the Secretary*

In the Matter of )  
)  
MDS OPERATIONS, INC. ) WT Docket No. 07-255  
)  
Petition for Waiver to Increase Effective ) EXPEDITED ACTION  
Isotropic Radiated Power Limitations ) REQUESTED  
Applicable to Multichannel Video Distribution )  
and Data Service Station WQAR561 )

To: Chief, Wireless Telecommunications Bureau

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**SUPERSEDING PETITION FOR RULE WAIVER**

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June 25, 2009

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## SUMMARY

MDS Operations, Inc. (“MDSO”) respectfully requests a limited waiver of the provision of the Commission’s Rules which restricts power levels of Multichannel Video and Data Distribution Service (“MVDDS”) transmitters for its Albuquerque-Santa Fe DMA license. MDSO previously requested such a waiver for all of its MVDDS licenses; this superseding Petition for Rule Waiver narrows that earlier request to a single market and to the specific power levels stated herein.

Tests conducted in the Albuquerque-Santa Fe DMA by MDSO, under an experimental license grant, demonstrated that the subject MVDDS station can readily be operated at higher power levels than those permitted by the Commission’s Rules, without causing any harmful interference to satellite TV users, service providers or other interested parties. In particular, as the Engineering Report attached to MDSO’s original waiver request analyzing the field tests demonstrates, MVDDS stations can be operated in the subject DMA at significantly higher power than the FCC’s Rules currently allow without any adverse impact on Direct Broadcast Satellite (“DBS”) reception. Moreover, MDSO does not seek a waiver of the MVDDS-DBS coordination requirements; those requirements and MDSO’s system design guarantee that each site will be carefully engineered to avoid causing any harmful interference.

In adopting extremely conservative power limits for MVDDS, the Commission anticipated that MVDDS licensees might require a waiver of those constraints; this Petition requests such a waiver. In addition to the lack of harm to any interested party, the requested power increase will have affirmative public interest benefits. Higher power operations will reduce the number of transmitters required, thus permitting more economical and efficient deployment of MDSO’s system in this market, which will expedite the provision of competitive

wireless broadband services to the public. Moreover, because MDSO's system design for this market contemplates placing a higher-powered transmitter at high elevations so as to cover wider areas with a single transmitter, nearby rural communities will be among the first to receive new video and data services.

For these reasons, the requested waiver will further the Commission's goal of rapidly deploying new wireless broadband services to interested consumers in the Albuquerque-Santa Fe DMA. MDSO respectfully submits that the requested waiver should be expeditiously granted.

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To: Chief, Wireless Telecommunications Bureau

**SUPERSEDING PETITION FOR RULE WAIVER**

MDS Operations, Inc. (“MDSO”), by its attorneys and pursuant to Section 1.925 of the Commission’s Rules, 47 C.F.R. ¶ 1.925, hereby requests a waiver of Rule Section 101.147(p), which limits Effective Isotropic Radiated Power (“EIRP”) for MVDDS stations to 14 dBm per 24 MHz of spectrum, and relevant portions of any related MVDDS rules to the extent necessary to allow operation of Station WQAR561 in the Albuquerque-Santa Fe Designated Market Area (“DMA”) at higher power levels than what the Rules currently authorize. Specifically, MDSO seeks a rule waiver to allow operation at 36 dBm per 24 MHz of spectrum from a single transmitter that will provide coverage throughout the Albuquerque area of this DMA, using the system design that was successfully tested in this market area. MDS intends to follow the same design methodology in all systems that it constructs in other areas within this DMA.

This Petition amends and supersedes MDSO's earlier request for a waiver of those Rule provisions<sup>1</sup> and such other of the MVDDS technical Rules as applicable to all of its MVDDS licenses. (This Petition also incorporates by reference the "Engineering Report" and related interference studies that were previously submitted to the FCC as Exhibit One of the Original Petition. Due to the length of that Report, MDSO will not resubmit copies to the FCC unless requested). Specifically, this Petition narrows the scope of the Original Petition to request technical rule waivers solely for the Albuquerque-Santa Fe DMA, in light of technical and interference findings that are unique to that market. To the extent it is unclear from prior filings in this proceeding, MDSO hereby also clarifies that it is not seeking a waiver of the equivalent power flux density ("EPFD") limits of the Commission's Rules. The EPFD limits imposed by the Rules will be met even if the subject Rule waivers are granted.<sup>2</sup>

This request would permit MDSO to operate with a single transmitter in the Albuquerque area of the Albuquerque-Santa Fe DMA at EIRP levels of up to 36 dBm per 24 MHz of spectrum<sup>3</sup> from the transmitter location in the licensed service area that was used throughout MDSO's experimental tests employing higher output power. MDSO requests that this waiver be granted based on the specific system design created by MDSO's sister company, MDS America, Inc. ("MDSA"), which was successfully deployed in this area on an experimental basis to allow higher EIRP without causing any harmful interference. MDSO will use only MDSA-designed

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<sup>1</sup> Filed May 7, 2007; corrected August 29, 2007 (the "Original Petition"). A "Supplement" to the Original Petition was filed on August 29, 2007. This "Petition" contains substantially similar arguments as the Original Petition and Supplement; however, they have been narrowed to apply to a single DMA.

<sup>2</sup> Because this Petition narrows the scope of MDSO's previous waiver request, this Petition is equivalent to what the Rules deem a "minor amendment" for which no additional public notice would be required. *See generally* 47 C.F.R. § 1.929.

<sup>3</sup> *Cf.*, MDSO "Engineering Report," previously submitted to the FCC as Exhibit One of its Original Petition at 30-31, 33. The highest power level referenced in that report was 44 dBm per 24 MHz of spectrum, at which level perceptible, although not always strongly so and not necessarily interfering, MVDDS signals were present at the receivers being tested. Out of an abundance of caution, MDSO is proposing a power ceiling considerably below that level.

and built systems in the Albuquerque-Santa Fe DMA. Operations under the waiver would be subject to prior coordination with Direct Broadcast Satellite (“DBS”) and non-geostationary orbit fixed satellite service (“NGSO FSS”) operations in accordance with Section 101.1440(d)-(e) and 101.103(f), respectively; and subject to protection of MVDDS licensees in adjoining DMAs or incumbent public safety licensees in accordance with Section 101.1421.

In support hereof, the following is respectfully shown:

### **I. Background.**

MDSO is the holder of eighty (80) MVDDS licenses nationwide, obtained in Auction Nos. 53 and 63. Its affiliate MDSA is in the business of designing and manufacturing wireless equipment and infrastructure. MDSA is the U.S. licensee of MDS International S.A.R.L., which has deployed numerous MVDDS systems outside of the United States.

MDSA has been a longtime, leading proponent in the U.S. of the creation of MVDDS. *See e.g.*, Comments of MDS America on Further Notice of Proposed Rule Making in ET Docket No. 98-206 (filed March 12, 2001)<sup>4</sup>; Reply Comments of MDS America, Further Notice of Proposed Rule Making in ET Docket No. 98-206 (filed April 5, 2001)<sup>5</sup>; MDS America Opposition to Various Petitions for Reconsideration, ET Docket No. 98-206 (filed April 24, 2001) (“Recon Opposition”)<sup>6</sup>; Reply of MDS America, Inc. to Oppositions to Petition for Reconsideration, ET Docket No. 98-206 (filed Sept. 13, 2002) (“Recon Reply”)<sup>7</sup>; Letter to Marlene H. Dortch from Nancy Killian Spooner, Ex Parte Presentation in ET Docket No. 98-206 (filed April 16, 2003) (the “April 16<sup>th</sup> Letter”)<sup>8</sup>; Letter to William F. Caton from Nancy Killian

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<sup>4</sup> Available at [http://gulfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=6512562118](http://gulfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6512562118), *et seq.*

<sup>5</sup> Available at [http://gulfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=6512564295](http://gulfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6512564295).

<sup>6</sup> Available at [http://gulfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=6512565698](http://gulfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6512565698).

<sup>7</sup> Available at [http://gulfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=6513291570](http://gulfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6513291570).

<sup>8</sup> Available at [http://gulfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=6514081988](http://gulfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6514081988).

Spooner, Ex Parte Presentation in ET Docket No. 98-206 (filed March 13, 2002) (the “March 13 Letter”)<sup>9</sup>. In addition to the MVDDS rulemaking proceedings, MDSA also participated in the Commission’s dockets concerning the facilitation of wireless services in rural areas, promoting the deployment of high-power MVDDS in rural communities. Comments of MDS America in WT Docket No. 02-382 (filed Oct. 15, 2002) (“Rural Spectrum Comments”).<sup>10</sup>

Under an experimental license grant first issued in May of 2001, MDSA conducted studies to demonstrate to the Commission the ability to operate in MVDDS spectrum without causing harmful interference to other users of the subject spectrum bands. *See*, Call Sign WC2XPU (File Nos. 0095-EX-PL-2001; 0005-EX-ML-2002; 0074-EX-RR-2003).

In 2006, MDSA was granted a second experimental authorization, under Call Sign WC9XKW, to further test the operation of MVDDS stations at power levels higher than those that would normally be permitted by Section 101.105(a)(4) of the Rules, and the impact, if any, on Direct Broadcast Satellite (“DBS”) operations. *See*, File Nos. 0738-EX-ST-2005; 0548-EX-ST-2006.

MDSA retained Dr. Bahman Badipour and his company, Analytic Consulting Services (“ACS”), to conduct testing of high-powered MVDDS operations and their “real world” impact under experimental Call Sign WC9XKW in the Albuquerque-Santa Fe, NM DMA. Dr. Badipour is one of the world’s leading experts on MVDDS technology. From September 14, 2006 through October 9, 2006, ACS conducted field tests in and around the Albuquerque-Santa Fe, NM DMA, which is the subject of this Petition. Those field tests studied the effects of MVDDS transmissions of varying power levels on the receipt of DTV signals, using DTV receive

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<sup>9</sup> Available at [http://gulfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=6513081697](http://gulfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6513081697).

<sup>10</sup> Available at [http://gulfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=6515383239](http://gulfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6515383239).

equipment of the kind in use by Albuquerque customers; three different types of receive antennae were used.

The results of those field tests are described in the ACS “Albuquerque MVDDS Test Report,” completed on January 9, 2007 (the “Engineering Report” or “Report”), a complete copy of which was previously submitted to the FCC. Those tests demonstrated that relatively high power operations resulted in little difference in the detection of MVDDS signals at the DBS receivers, and, detection of MVDDS signals did not correlate to actual harmful interference. Although MDSA had provided the DBS providers with FCC-required formal notice well in advance of the actual field tests, and had even given public notice of its activities in local media, MDSA did not receive a single complaint of interference from any DBS provider or customer at any time during the testing process. *See* Engineering Report at 36.

## **II. Standard For Review; Propriety of Expedited Action.**

A waiver of the Commission’s Rules is appropriate where, *inter alia*, “[t]he underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and that a grant of the requested waiver would be in the public interest[.]” *See* 47 C.F.R. § 1.925(b)(3). According to this FCC’ Rules and precedents interpreting this rule, grant of the requested waiver of the MVDDS technical rules is justified.

The underlying purpose of the MVDDS power limitations, which is to protect DBS receivers from harmful interference and degradation of service without “unduly constraining the deployment of MVDDS[.]” will be furthered by a grant of the requested waiver. *See, e.g., 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; Amendment of the Commission's Rules to Authorize Subsidiary Terrestrial Use of the 12.2-*

*12.7GHz Band by Direct Broadcast Satellite Licensees and Their Affiliates; and Applications of Broadwave USA, PDC Broadband Corporation, and Satellite Receivers, Ltd. to Provide A Fixed Service in the 12.2-12.7GHz Band*, Memorandum Opinion and Order and Second Report and Order, 17 FCC Rcd 9614, ¶¶ 68-69 (2002) (“*Second R&O*”). The Commission specifically chose “very conservative technical parameters” in establishing those limitations. *Id.* at ¶ 71. The stringent power limitations imposed by the Commission do work to constrain the deployment of MVDDS, by requiring significant MVDDS licensees to build out more transmitters due to the low-power operation of each, the Commission’s Rules significantly increase the costs of MVDDS deployment. Conversely, as demonstrated in the Report, a well-designed MVDDS system can operate at power levels well above the maximum EIRP generally permitted by the Rules without negative impact on DBS reception. Therefore, the requested waiver would not undermine any of the interests served by the Rules, and indeed, will further the Commission’s goal of allowing for the rapid, flexible deployment of MVDDS services.

Furthermore, a grant of the requested waiver will serve the public interest. In creating MVDDS, the Commission envisioned that this service would “deliver competition to other video distribution and data services and offer localized service that may not be possible through other 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, ¶ 237 (2000).

A grant of the proposed waiver would permit MDSO to more rapidly and cost-effectively complete the deployment of service throughout a substantial portion of the Albuquerque-Santa Fe DMA, thereby allowing it to become a cost-effective, efficient competitor to incumbent

video and broadband services in that DMA. The additional costs and additional construction time to deploy MVDDS services in the absence of a waiver will negatively impact prospective customers by delaying services and requiring higher subscription fees; and, denial would require MDSO to concentrate first on more populated areas in this and other DMAs in order to institute viable systems, with attendant delays to rural areas. The rapid deployment of new broadband services, particularly to rural areas, is foremost among the Commission's public policy goals; the requested waiver will advance these goals in furtherance of the public interest.

MDSO submits that expedited action on this Petition is particularly appropriate. The Original Petition, as corrected and supplemented, has been on file with the FCC for nearly two years. MDSO's proposal has been subject to Public Notice, comments and numerous *ex parte* presentations; the issues raised in this Petition have been thoroughly briefed and studied. As demonstrated in the Report, higher-powered MVDDS services can be provided in the Albuquerque area of this DMA without harm to DBS services. The current power limitations that apply will determine the number of sites required to construct a commercially and operationally viable system throughout this DMA. Concomitantly, those power limitations affect the availability of equipment,<sup>11</sup> and, when appropriate equipment can be obtained, they will determine the amount of equipment and the number of transmitter site leases needed to provide blanket coverage to all populated areas in this DMA. All of those factors will in turn directly influence system design and costs. Consequently, MDSO's deployment of MVDDS service in this market is at a stand-still during the pendency of this request; that result is surely contrary to the Commission's intentions for MVDDS spectrum.

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<sup>11</sup> It should also be noted that there is currently no commercially-available MVDDS equipment designed to operate within the power restrictions imposed by the Commission's Rules.

It is also worth noting that since this proceeding was initiated Congress has clearly voiced its concern about promoting the rapid deployment of broadband services nationwide, particularly in those parts of the country that are underserved or have no broadband services at all. This Congressional mandate was backed by an Eight Billion Dollar financial commitment in the American Recovery and Reinvestment Act of 2009. Expedited action on this Petition would be in furtherance of this Congressional mandate.

### **III. A Waiver for the Albuquerque DMA is Appropriate.**

In establishing rules for MVDDS, the Commission adopted admittedly conservative technical rules to protect co-primary DBS systems. *See, Second R&O* at ¶¶ 26, 71. The Commission anticipated that, due to the new Rules' technical constraints, MVDDS licensees might wish to design systems that exceeded the MVDDS Rules' limitations. *Id.* at ¶ 236. Accordingly, the FCC instructed interested licensees to file a petition for waiver, showing "that the waiver would not cause harmful interference to DBS services." *Id.* at n. 573.

In addition to rule waivers as foreshadowed and anticipated in the MVDDS rulemaking proceeding, the well-known legal standards by which the FCC adjudges rule waivers readily apply to MDSO's request. "The agency's discretion to proceed in difficult areas through general rules is intimately linked to the existence of a safety valve procedure for consideration of an application for exemption based on special circumstances." *WAIT Radio v. FCC*, 418 F.2d 1153, 1159 (D.C. Cir. 1969). "That an agency may discharge its responsibilities by promulgating rules of general application which, in the overall perspective, establish the 'public interest' for a broad range of situations, does not relieve it of an obligation to seek out the 'public interest' in particular, individualized cases." *Id.* There are "special circumstances" present in the

Albuquerque-Santa Fe DMA, as reflected in the Engineering Report and studies conducted by MDSO in that market, that warrant an exception from the general rule in this case.

By way of background to the engineering study made in the Albuquerque area of this DMA, in many other filings before the FCC, MDSA provided the Commission with information concerning its experience in deploying MVDDS equipment outside the United States. These filings all demonstrated that MDSA, through system design and experience, could operate MVDDS stations at EIRP levels higher than those authorized in the FCC's Rules without causing harmful interference to co-channel services. *See, e.g.*, Recon Opposition at 5-7; Recon Reply at 2-5; April 16<sup>th</sup> Letter at 4-5.

Moreover, in its MVDDS rulemaking docket, the Commission determined the proper procedure for handling MDSO's rule waiver request. In the order that adopted the MVDDS technical rules, the Commission stated its intention to promote "flexible use of the spectrum" by allowing MVDDS licensees to operate at variance from those rules, and described the procedure for licensees to follow:

"We clarify that MVDDS applicants are not limited to using technology that complies with the operating parameters adopted here. However, *any entity seeking to employ a terrestrial service technology that does not comply with our technical rules must file a waiver petition*, on which public comment will be sought. As part of the waiver process, the entity must submit an independent technical demonstration of its equipment and technology. We find that this process is in furtherance of the Communications Act and consistent with the requirements of the LOCAL TV Act's Section 1012(a), as discussed above. While we are mindful of the need to protect current and future entities from harmful interference within the band, we seek to allow flexible use of the spectrum and, as such, do not wish to limit current and future technological innovations. We find that the independent testing requirement will balance these competing interests for terrestrial wireless technologies that do not comply with the technical rules."

*Second R&O*, 17 FCC Rcd. at 9704 (emphasis added). “Terrestrial service technology” was intended to mean “the operating parameters for MVDDS licensees . . . codified by this Order,” including the power limitations adopted therein. *Id.* at 9703-04.

On reconsideration, in upholding the EIRP and EPFD limits adopted in the *Second R&O*, the Commission again stated that “MVDDS providers may file petitions for waiver of the general MVDDS limits adopted in the *Second R&O*.” *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; Amendment of the Commission's Rules to Authorize Subsidiary Terrestrial Use of the 12.2-12.7GHz Band by Direct Broadcast Satellite Licensees and Their Affiliates; and Applications of Broadwave USA, PDC Broadband Corporation, and Satellite Receivers, Ltd. to Provide a Fixed Service in the 12.2-12.7GHz Band*, Fourth Memorandum Opinion and Order, 18 FCC Rcd. 8428, 8469 (2003) (“*Fourth MO&O*”).

The Commission has previously used waivers to encourage the deployment of new technologies, including proposals far more aggressive than anything sought in MDSO's Petition. For example, the Commission used a waiver proceeding to permit Hye Crest Management, Inc. (“Hye Crest”) to operate a new video service on 28 GHz frequencies then allocated for point-to-point microwave operation, in New York City. *Hye Crest Management, Inc.*, 6 FCC Rcd. 332 (1991). The Commission found that proceeding by adjudication rather than rulemaking was warranted because it had a statutory obligation to “encourage the provision of new technologies’ in communications services offered to the public” and “the waiver approach offers the most efficient and expeditious means available” to do so. *Id.* at 334. The Commission went on to cite other cases in which it proceeded by waiver to authorize operation on frequencies for services for which they were not allocated. *Id.* Moreover, the Commission found no harm to the authorized

users of the 28 GHz band, relying on the availability of other frequencies and of engineering techniques that could increase capacity on the remaining bands. *Id.* On balance, the Commission found that:

“Hye Crest has demonstrated that its proposal will facilitate the introduction of a novel and innovative use of previously unused spectrum. That spectrum would be used to bring a new and needed multichannel video service to the New York City market in competition with cable television and other video delivery and distribution services, with no foreseeable harm to the 28 GHz band’s assigned users.”

*Id.*

The relief sought by MDSO’s Petition is in no way as sweeping as that granted to Hye Crest. MDSO’s far more modest proposal simply seeks to operate at slight variance from certain technical rules in order to more efficiently and rapidly deploy the service for which the frequencies in question have been allocated, in a market area in which the affects of the requested variance have been thoroughly tested. MDSO has already been licensed through the Commission’s auction process, at a cost of more than Four Million Dollars in net high bids,<sup>12</sup> and has evidently made a significant financial commitment toward the deployment of this new technology in previously unserved areas.

Many of the public interest benefits supporting the Hye Crest waiver weigh in favor of MDSO’s Petition. MVDDS was allocated to permit efficient use of the subject spectrum and to provide for novel services, including broadband and video, *Second R&O*, 17 FCC Rcd. at 9617; and the Commission noted the public interest benefits of a “new potential competitor in the multichannel video and data markets.” *Id.* at 9634. The development and encouragement of

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<sup>12</sup> See <http://wireless.fcc.gov/auctions/53/charts/53market.xls> and <http://wireless.fcc.gov/auctions/63/charts/63bidder.xls>. MDSO’s net high bid for the Albuquerque DMA was \$399,100.

advanced, efficient communications services to the public of course remain among the Commission's core statutory mandates. *See*, 47 U.S.C. §§ 151, 303(g); 309(j)(3)(A), (D).

The Commission has often observed the statutory and regulatory policies in favor of promoting the introduction of broadband services. *See e.g.*, *Appropriate Regulatory Treatment for Broadband Access to the Internet Over Wireless Networks*, 22 FCC Rcd 5901, ¶ 27 (2007); *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, 20 FCC Rcd 14853, ¶ 8 (2005); *Local Competition and Broadband Reporting*, 15 FCC Rcd 926, ¶¶ 2-3 (2000). Yet, nearly five years after the first MVDDS stations were licensed, MDSO is not aware of a single operating system in the United States. To date, MDSO's affiliate is (to the best of its knowledge) the sole entity that has successfully launched MVDDS operations, albeit not in the U.S. MDSO is ready, willing and able to commence the deployment of its MVDDS networks. That deployment, especially to unique communities (based on population density or topography) such as the Albuquerque metropolitan area in the subject DMA, would be greatly accelerated if MDSO could operate at higher power. MDSO has provided the Commission with evidence that it can do so in the Albuquerque metropolitan area without causing any interference to DBS operations in that location.

MDSO's affiliate submitted evidence in its comments in the MVDDS rulemaking that MVDDS operation at higher EIRP without interference was feasible,<sup>13</sup> and the Commission itself recognized that the power levels it ultimately adopted were "very conservative."<sup>14</sup> Nonetheless, MDSO's Petition does not challenge the FCC's underlying rules. *See e.g.*, *KCST-TV, Inc. v. FCC*, 699 F.2d 1185, n. 21 (D.C. Cir. 1983), *citing WAIT Radio v. FCC*, 418 F.2d 1153, 1158 (waiver request presupposes the validity of existing rule). There may be equipment models and

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<sup>13</sup> *See e.g.*, MDS America, Inc., Petition for Reconsideration in ET Docket No. 98-206 (filed June 24, 2002).

<sup>14</sup> *Second R&O*, 17 FCC Rcd. at 9642.

system designs for which the strict power limitations imposed by the Commission's rules would be necessary or advisable.

The Petition expressly relies on MDSO's use of the equipment and system design techniques of its affiliate MDSA as tested throughout the Albuquerque metropolitan area over a significant period of time.<sup>15</sup> Should this Petition be granted, MDSO would operate in the Albuquerque area of the subject DMA using the same design configuration and constraints. Similar system designs and configurations could be readily deployed in other DMAs where MDSO is the licensee; should the FCC decide that a market specific waiver approach will be necessary in those other DMAs, MDSO expects that it could replicate the zero-interference findings of its Engineering Report in those markets.

MDSO's rule waiver request reflects and responds to the unique topographic and geographic characteristics of the Albuquerque metropolitan area in this DMA, and, MDSO's engineering design for providing service to the largest population throughout that community. MDSO renders no opinion as to any other equipment or technical configuration which could be used by any other MVDDS licensee in this or other markets, nor does its Petition ask the Commission to decide whether any such other equipment or configuration would be suitable for higher-powered operation. Rather, MDSO's Petition demonstrates that, based upon the specific technical design described in its Report, its MVDDS systems may operate at higher EIRP limits in the Albuquerque area of this DMA, than those provided for under the Commission's rules, without causing any harmful interference.

MDSO is not proposing any operations at odds with the type of service authorized by the Commission's MVDDS rules. *Cf.*, *AirCell, Inc.*, 14 FCC Rcd. 806, ¶ 20 (Wir. Tel. Bur. 1998)

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<sup>15</sup> While other MVDDS licensees have expressed interest in using MDSA's equipment and technical services, MDSO cannot say how many of them, if any, will actually do so.

(granting waiver of ban on cellular use in airplanes, noting that request did not propose an entirely new type of service, but an “alternate mode” of providing services on their existing allocation). MDSO is not asking the Commission to establish “absolute standards of general, prospective applicability” to all MVDDS systems; it is therefore appropriate for the Commission to proceed through an adjudicatory waiver proceeding. *See, e.g., Broadcast Corporation of Georgia (WVEU-TV), Atlanta, Georgia; For Authority to Resume Full Power Operation*, 96 FCC 2d 901, ¶¶14-15 (1984) (discussing characteristics of adjudicatory v. rulemaking proceedings in connection with settlement of interference issue); *see also AirCell, Inc., supra*, at ¶ 20 (waiver applies only to the system proposed; any other proposals would need to be evaluated on their own merits).

In comparable circumstances the Commission has previously found that waivers of its technical rules are appropriate to permit the rapid deployment of advanced or improved service offerings. For example, in *AirCell, Inc.*, the Commission granted a waiver to permit the deployment of mobile terminals that would allow for cellular telephone use aboard aircraft in flight, over existing cellular licenses. The Commission noted its mandate “to promote the efficient use of spectrum resource, as well as to promote new technologies and make available new services to the public,” and found that the AirCell system would further that mandate by “generat[ing] alternate service offerings for cellular licensees” and benefiting consumers. 14 FCC Rcd. 806, ¶ 17.

Similarly, the Commission has previously waived its Part 68 rules limiting the power of out-of-band signals to allow the introduction of a product that allowed concurrent Internet access and voice communications over a single telephone line. *Paradyne Corporation*, 14 FCC Rcd. 4496 (Com. Car. Bur. 1999). The Commission there found that Paradyne’s proposed offering

would serve the public interest “increased consumer choice and value” by allowing for high-speed digital transmission without a separate line. *Id.* at ¶ 11. The Commission also relied on Paradyne’s compliance with particular technical standards as assurance that a waiver would not cause harm to the public switched network. *Id.* at ¶ 18.

Similar to the cases in which the Commission has approved waivers to its technical rules, MDSO here proposes to more rapidly deploy advanced services (in MDSO’s case, high-speed, digital broadband data) throughout the Albuquerque metropolitan area than would otherwise be feasible without this rule waiver. MDSO’s proposal would allow for the more rapid deployment of broadband services than is possible under the existing rules, but requires only the waiver of a few aspects of the Commission’s rules. As discussed in greater detail below, MDSO’s proposed technical configuration is uniquely suited to speed deployment not only to the downtown/city center of Albuquerque, but to adjoining rural and remote communities, and it will cause no harm to any other party.

#### **IV. The Waiver Will Not Cause Harmful Interference to DBS Operations.**

As demonstrated by MDSO's Engineering Report, higher power operations for MVDDS are eminently feasible throughout the Albuquerque area of this DMA without causing harmful interference. As indicated in the Engineering Report, in the test area there was generally little to no perceptual presence of MVDDS signals at the DBS receivers at EIRPs at or above 36 dBm per 24 MHz of spectrum. *See* Report at 28 -35, and Figures referenced therein. Throughout nearly a month of continuous testing (the subject transmitter remained on for 24 hours a day), there was not a single reported interference complaint from any DBS licensee or customer, at any power level. *Id.* at 35.

The testing procedures used included taking two sets of measurements of DBS reception in each case, one with the MVDDS transmitter on and the other with the MVDDS off, so that the slightest presence or effect of the MVDDS signal could be isolated. *See id.* at 3. The MDS transmitter was operated from a tower at a height of 30 meters AGL, the base of which was 3,239 meters AMSL. *Id.* at 10. The test configuration chosen was intended to replicate the worst case scenario. *Id.* at 14. Measurements were taken at thirty-three sites throughout the Albuquerque metropolitan area, including the center of town and remote outlying areas of Albuquerque. *Id.* at 20-21. No interference to DBS signals from MDSO's operations could be detected at any of those locations at power levels higher than those requested in this rule waiver.

Should this rule waiver be granted, MDSO will operate its MVDDS system in the Albuquerque metropolitan area using an identical system configuration; that is, a single transmitter will be located on the same mountaintop location as was used throughout the testing period. That location is ideal in that it can “look down” on most of the metropolitan and outlying Albuquerque area , providing the best coverage at the proposed output power, utilizing just one transmitter. The system will operate at no greater than 36 dBm per 24 MHz of spectrum, which is lower than the power levels used throughout the testing period. This system design will actually be more favorable than a lower power design that would require multiple transmitters in that the use of multiple transmitters throughout the Albuquerque area increases the potential sources of interference to DBS operations. Also, the use of multiple transmitters in the same geographic area raises the possibility that an MVDDS system could cause harmful interference to its own operations.

As the Engineering Report explains in detail, operations at even higher EIRP levels than those requested in this Petition resulted in *no* harmful interference to DBS signals throughout the

test area. MDSO is mindful of the Commission's concern for DBS viewers, as well as its statutory obligation to ensure that those viewers are not subjected to "harmful interference."<sup>16</sup> However, as the Commission held in the *Second R&O*, "harmful interference" does not include outages – let alone the mere presence of a secondary signal – so limited that viewers do not even notice it. *See Second R&O*, 17 FCC Rcd. at 9642-43. The U.S. Court of Appeals for the D.C. Circuit upheld that approach to determining whether MVDDS could be deemed to interfere with DBS, finding it reasonable. *Northpoint Technology, Ltd. v. FCC*, 414 F.3d 61 (D.C. Cir. 2005).

As its affiliate MDSA has long attested, the Engineering Report shows that careful system design protects DBS reception as well as or better than blanket prohibitions. *See id.* at 35. The equipment and techniques pioneered by MDSA permit such careful design, thus allowing an MVDDS provider to operate at higher power levels without causing harmful interference or any impact that would be perceptible to lawful DBS customers entitled to protection. Even in downtown locations, as with Site 3 in central Albuquerque, MVDDS operations with EIRP well in excess of 14 dBm per 24 MHz of spectrum showed no interference to DBS transmissions. *See id.* at 29-31. Moreover, at the highest EIRP level tested, MDSA's mitigation techniques resulted in a 44 dBm per 24 MHz of spectrum MVDDS signal being barely detectible at DBS receivers in this area. *Id.* at 30.

The test results conform with FCC requirements and warrant a grant of this waiver request. "In the absence of harmful interference to DBS, no cognizable interest of DBS licensees will be undermined." *Second R&O* at ¶ 32. The Commission's Rules "define[] *harmful interference* as '... interference which ... seriously degrades, obstructs, or repeatedly interrupts a

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<sup>16</sup> *See* Section 2002(b)(2) of the Rural Local Broadcast Signal Act ("RLBSA"), Title II of S. 1948, the Intellectual Property and Communications Omnibus Reform Act of 1999, Appendix I to Pub. L. 106-113. *See also, Second R&O* at ¶ 26 (referring to the "stringent" rules adopted ensuring impact on DBS "would not likely approach a level that could be considered harmful interference"), 17 FCC Rcd at 9813, *et seq.*

radiocommunication service[.]” *Fourth R&O* at ¶ 23 (emphasis in original). The evidence in the Report indicates that using the same system design on a permanent basis in the Albuquerque area of this DMA, power increases above the ceilings imposed by the Commission’s Rules are possible before any degradation, obstruction or interruption of DBS service would be likely to occur – indeed, often before any detectable MVDDS signal would be present at the DBS receiver. Consequently, as demonstrated in the Engineering Report, the requested waiver will not adversely affect DBS licensees or their customers throughout the Albuquerque metropolitan area.

MDSO’s Petition is entirely consistent with the Commission’s approach in the *Second R&O* . Simply put, a grant of MDSO’s requested waiver will result in *no* perceivable “degrade[ation], obstruct[ion] or . . . interrupt[ion]” of DBS reception. The field studies described in the Report intentionally created worst-case scenarios in a real-world environment, Report at 13-14, 19; and, in no case was the result an interfering MVDDS signal that would likely be noticeable to a viewer of DBS service. *Id.* at 26, 30. Not once during these studies did any DBS licensee or subscriber anywhere in the Albuquerque service area complain of interference or degradation of service. *Id.* at 35.

MDSO does *not* seek a waiver of the notification and coordination procedures of Section 101.1440(d)-(e), or the DBS customer complaint provisions of Section 101.1440(g). MDSO will notify DBS licensees and their customers of record in the subject service area prior to the installation of each transmitter, as required by the Rules. Transmissions will be carefully coordinated for optimum performance in the “real world” Albuquerque service area environment to ensure that harmful interference to DBS reception does not occur. Deployment in that market will be accompanied by the required notice to DBS customers of record, and, any interference

perceived by them will be promptly corrected by MDSO in full compliance with the Commission's rules.

To demonstrate its commitment to ensuring the interference-free co-existence of its systems with DBS, MDSO would be willing to accept a waiver conditioned upon DBS protection requirements even more stringent than those required by Section 101.1440 of the Commission's rules. Specifically, MDSO will ensure the DBS licensees in the Albuquerque market area have a current, toll-free number for MDSO's support services personnel, which can be given to local DBS subscribers. For any DBS subscriber who experiences interference to his or her DBS reception from MDSO's operations, and who would not have experienced such interference but for MDSO's operation at the higher power levels requested in the Petition, MDSO will provide and install filters, similar to those used at certain test sites in the Albuquerque testing, free of charge. Finally, if MDSO is unable to eliminate the interference caused by its higher-powered operations to any DBS customer, MDSO will reduce its power to the greater of the EIRP at which the harmful interference is eliminated or the maximum EIRP permitted by 47 C.F.R. § 101.147(p). *Cf., Aircell, Inc., supra*, at ¶ 19.

**V. The Waiver will Promote Service in Rural and Underserved Areas.**

MDSO's proposed configuration is particularly well-suited to expediting service to rural areas surrounding Albuquerque. By design, MDSO's higher-powered system would involve the placement of a transmitting antenna at a high elevation in a remote area of the Albuquerque metropolitan area. The rural and exurban communities nearest that transmitter site would receive service right away.

Although it is among the larger markets for which MDSO holds an MVDDS license, the Albuquerque-Santa Fe DMA is below the top 50 markets; its 2008 Nielsen ranking was 44. *See*

[http://www.nielsenmedia.com/nc/nmr\\_static/docs/2007-2008\\_DMA\\_Ranks.xls](http://www.nielsenmedia.com/nc/nmr_static/docs/2007-2008_DMA_Ranks.xls) are. Because so much of the state is desert and high mountain ranges, the Albuquerque-Santa Fe DMA covers approximately 86% of the State of New Mexico. See e.g., [http://www.polidata.org/pub/maps/rg2000/nm\\_reg.pdf](http://www.polidata.org/pub/maps/rg2000/nm_reg.pdf), at p. AS.35.2. All but approximately five New Mexico counties are contained within this DMA. *Id.* at map of “Designated Market Areas; DMAs.” The subject DMA thus covers not only the urban areas of Albuquerque and Santa Fe and their suburbs, it also covers vast rural areas within the State. Once MDSO constructs and deploys service throughout the Albuquerque metropolitan area, it will be able to provide service to over a third of the state's entire population, including many remote locations that may not have any terrestrial broadband services, from this one transmitter site, in a cost-effective and interference-free manner.

Similar to MDSO’s proposal, the Commission has in many other contexts treated smaller markets differently from larger ones. See, e.g., *In the Matter of Service Rules for the 698-746, 747-762 and 777-792 MHz Bands*, Second Report and Order, FCC 07-132, ¶ 35 (rel. Aug. 10, 2007) (“700 MHz Second R&O”) (describing rules for Commercial Services Band, including allowance of higher-powered operations in rural areas); *id.* at ¶ 357 (adopting similar rules for Public Safety licenses); *Facilitating the Provision of Spectrum-Based Services to Rural Areas and Promoting Opportunities for Rural Telephone Companies To Provide Spectrum-Based Services*, 19 FCC Rcd 19078, ¶¶ 86-101 (2004) (“Rural Order”). See also, 47 C.F.R. §§ 73.624(d)(1) (establishing earlier DTV construction deadlines for network-affiliated stations and stations in top 30 markets); 76.505(d)(3) (allowing for local exchange carrier to obtain a controlling interest in a cable system if, *inter alia*, system is outside of the top 25 markets); 90.267(b)(2) (power limitations for certain 450-470 MHz frequencies within 80 kilometers of top

100 urban areas); 101.103 and 101.147(y)(2) (restricting number of non-GSO mobile satellite feeder link earth station complexes depending on Metropolitan Statistical Area ranking). The Commission has relied on the rural nature of affected service areas in considering waiver requests in a variety of circumstances. *See, e.g., Heart of Iowa Communications Cooperative and Iowa Telecommunications Services, Inc. d/b/a Iowa Telecom*, 21 FCC Rcd 2858, ¶¶ 19, 21 (2006) (study area waivers granted to permit applicant to devote improved services to rural areas); *Colo Telephone Co., et al.*, DA 07-33-17, ¶ 14 (Med. Bur., rel. July 23, 2007) (granting waivers of set-top box rules to petitioners who would provide all-digital service to rural areas).

More specifically, the Commission has noted that “increasing power limits in rural areas can benefit consumers in rural areas by reducing the costs of infrastructure and otherwise making the provision of spectrum-based services to rural areas more economic.” *Rural Order, supra*, at ¶ 86. In that proceeding, the Commission increased power limits in rural areas for cellular, broadband Personal Communications Services (“PCS”), and Advanced Wireless Services (“AWS”).

Consideration of the impact of technical restrictions upon smaller markets is a long-established public policy directive. Nearly two decades ago the Commission increased the height-power limits applicable to cellular services for reasons very much like those supporting MDSO’s Petition. *See Amendment of Parts 2 and 22 of the Commission’s Rules to Permit Liberalization of Technology and Auxiliary Service Offerings in the Domestic Public Cellular Radio Telecommunications Service*, 3 FCC Rcd 7033 (1988). Said the Commission:

“We believe that numerous benefits would result from relaxing the antenna height-power restrictions. Relaxation would make it far easier for cellular operators in medium-sized to smaller markets to construct one-cell systems. Such systems would permit new service to subscribers more rapidly than is possible with multiple-cell systems. Additionally, the cost of constructing the system would be reduced, leading to lower costs for service.”

*Id.* at ¶ 22.

The Commission has a long history of granting technical flexibility to licensees serving less populous areas. *See e.g., 700 MHz Second R&O, supra.; Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, Report and Order and Further Notice of Proposed Rulemaking*, 22 FCC Rcd 8064 ¶ 93 (2007) (allowing for higher power operations in rural areas by commercial licensees); *Amendment of the Commission's Rules for Rural Cellular Radio Service, Order on Reconsideration*, 2 FCC Rcd 3366, ¶ 15 (1987) (eliminating coverage requirements for Rural Service Areas due to concerns that such requirements “would impede our goal of providing rural cellular service to vast geographic areas”); *Amendment of the Commission's Rules for Rural Cellular Service, First Report and Order*, 60 RR 2d 1029, ¶ 31 (1986) (finding that the requirement to serve “vast territory with a scattered population and an uncertain cellular demand” necessitated relaxing height-power limitations in RSAs).

The benefits noted by the Commission in all of these proceedings apply with equal force to the higher-powered operations proposed in the Petition. The testing conducted by ACS relied on a single transmitting antenna, mounted on a tall tower at high elevation. *See Report* at 10. MDSO anticipates that essentially all of the Albuquerque market area can be served from this one site. In addition to the cost savings associated with such a configuration, because a suitable elevated site can be located outside of the major population center, MDSO’s system design contemplates that rural communities surrounding Albuquerque will receive the strongest signal levels and will have access to MDSO’s services immediately upon commencement of operations. Concomitantly, a grant of the requested waiver would eliminate any need for MDSO to primarily focus its deployment in urban areas. A grant of the waiver would permit MDSO to meet the Commission’s construction obligations, achieve “critical mass” of covered households

to create a viable service, and allow small, unserved or underserved communities to receive new, advanced broadband services at the same time those services become available to the urban centers of Albuquerque. MDSO is ready to begin construction in the Albuquerque DMA, almost immediately following a grant of the requested waiver.

#### **VI. A Waiver will Serve the Public Interest.**

“One of the Commission’s primary statutory obligations, as well as one of its principal public policy objectives, is to facilitate the widespread deployment of facilities-based communications services to all Americans, including those doing business in, residing in, or visiting rural areas.” *Facilitating the Provision of Spectrum-Based Services to Rural Areas and Promoting Opportunities for Rural Telephone Companies To Provide Spectrum-Based Services*, 19 FCC Rcd. 19078, ¶ 4 (2004). The Commission has previously noted that MVDDS shows promise for the provision of new video and broadband data services to the public, particularly in rural America. *See, e.g., Second R&O, supra*, at n. 26, ¶ 128. The requested waiver will advance that objective and serve the public interest by allowing an MVDDS system to be built using fewer transmitters operating from fewer sites within the Albuquerque DMA, thus substantially reducing the cost of deployment.

Congress has recently emphasized its commitment toward the deployment of high speed broadband services in rural and underdeveloped areas in the Recovery Act. MDSO’s system design, service plans, and small market orientation are all in perfect harmony with the broadband objectives articulated by Congress in its \$8 Billion Recovery Act commitment.

The cost savings that would be realized by a grant of the Petition will be particularly beneficial to rural areas – lower leasing, construction, utility and other expenditures that will result from installing fewer transmitters, enabling rapid deployment of service to low population

density areas, where it might otherwise be too costly to deploy services. High-power build-out in the Albuquerque-Santa Fe DMA will allow for cost-effective MVDDS design and installation, not only improving the economic feasibility of deploying MVDDS in sparsely-populated regions, but also decreasing the likelihood of interference to DBS reception by enabling more advanced interference mitigation techniques. *See*, Rural Spectrum Comments at 6-7. By allowing higher-powered operations, the Commission would mitigate the usual incentives to build first in urban areas, leaving the rural areas to be filled in later if at all. Rather, under the requested waiver, economies would favor early build-out in rural areas, where a single transmitter could serve multiple communities.

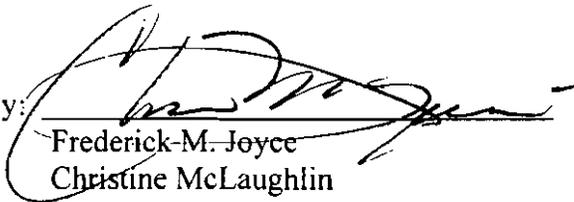
Although MDSO has now restricted its waiver request to this particular DMA and the Albuquerque market area, it should be noted that the MVDDS system design and configuration that will be employed in this market can be readily duplicated by MDSO in all of its other licensed DMAs. Consequently, having spent so much time and effort in pursuing this request with the FCC, it would be helpful to receive some guidance from the Commission as to how similar requests will be treated in the future. For instance, if it could duplicate these engineering findings in other DMAs, that is, show through experimental testing that it could operate at power level's higher than those contained in the MVDDS rules without causing harmful interference to DBS operations, MDSO would expect that it should not take the FCC another two years to rule on such a waiver request. Indeed, MDSO fully anticipates that its real-world operational experience in the Albuquerque market area will confirm the validity of its higher power system design, which could be replicated in other markets.

**Conclusion**

WHEREFORE, the foregoing premises considered, MDSO respectfully requests that the Commission expeditiously grant the waiver requested herein, and modify its MVDDS license for the Albuquerque-Santa Fe DMA in accordance with that waiver. If there are any questions about this request, kindly contact MDSO's undersigned attorneys.

Respectfully submitted,

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DATE: June 25, 2009

## CERTIFICATE OF SERVICE

I, Lula Robinson, a legal administrative assistant in the law firm of Venable LLP, do hereby certify that on this 25<sup>th</sup> day of June, 2009, copies of the foregoing Superseding Petition for Rule Waiver were sent *via* first class U.S. mail, postage prepaid:

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