

## APPENDIX D: FINAL RULES

### PART 25 – SATELLITE COMMUNICATIONS

#### § 25.208 Power flux density limits.

(k) In the band 12.2-12.7 GHz, for NGSO FSS space stations, the low-angle power flux-density at the Earth's surface produced by emissions from a space station for all conditions and for all methods of modulation shall not exceed the lower of the following values:

–158 dB(W/m<sup>2</sup>) in any 4 kHz band for angles of arrival between 0 and 2 degrees above the horizontal plane; and

–158+ 3.33(δ-2) dB(W/m<sup>2</sup>) in any 4 kHz band for angles of arrival (δ) (in degrees) between 2 and 5 degrees above the horizontal plane.

Note to paragraph (k): These limits relate to the power flux density, which would be obtained under assumed free-space propagation conditions.

#### § 25.139 NGSO FSS coordination and information sharing between MVDDS licensees in the 12.2 GHz to 12.7 GHz band.

(a) NGSO FSS licensees shall maintain a subscriber database in a format that can be readily shared with MVDDS licensees for the purpose of determining compliance with the MVDDS transmitting antenna spacing requirement relating to qualifying existing NGSO FSS subscriber receivers set forth in §101.129 of this chapter.

(b) Within ten business days of receiving notification of the location of a proposed MVDDS transmitting antenna, the NGSO FSS licensee shall provide sufficient information from the database to enable the MVDDS licensee to determine whether the proposed MVDDS transmitting site meets the minimum spacing requirement.

(c) If the location of the proposed MVDDS transmitting antenna site does not meet the separation requirements of §101.129 of this chapter, then the NGSO FSS licensee shall also indicate to the MVDDS licensee within the same ten day period specified above whether the proposed MVDDS transmitting site is acceptable at the proposed location.

(d) Nothing in this section shall preclude NGSO FSS and MVDDS licensees from entering into an agreement to accept MVDDS transmitting antenna locations that are shorter-spaced from existing NGSO FSS subscriber receivers than the distance set forth in §101.129 of this chapter.

**PART 101 - FIXED MICROWAVE SERVICES**

**§ 101.3 Definitions.**

Multichannel Video Distribution and Data Service (MVDDS). A fixed microwave service licensed in the 12.2-12.7 GHz band that provides various wireless services. Mobile and aeronautical operations are prohibited.

**§ 101.101 Frequency availability.**

Frequency band (MHz)	Radio Service				
	Common carrier (Part 101)	Private radio (Part 101)	Broadcast auxiliary (Part 74)	Other (Parts 15, 21, 24, 25, 74, 78 & 100)	Notes
		* * * *	* * *		
12,200-12,700	MVDDS	MVDDS, POFS		DBS, NGSO FSS	
		* * * *	* * *		

**§101.103 Frequency coordination procedures.**

(f) *Coordination and information sharing between MVDDS and NGSO FSS licensees in the 12.2 GHz to 12.7 GHz band.* Prior to the construction or addition of an MVDDS transmitting antenna in this frequency band, the MVDDS licensee shall provide notice of intent to construct the proposed antenna site to NGSO FSS licensees operating in the 12.2-12.7 GHz frequency band and maintain an Internet web site of all existing transmitting sites and transmitting antennas that are scheduled for operation within one year including the “in service” dates. In addition to the location of a proposed new transmitting antenna, MVDDS licensees shall provide to the NGSO FSS licensees a technical description of the operating characteristics of the proposed transmission facility. At a minimum, the following information must be included in each notification:

- Name of MVDDS licensee
- Geographic location (including NAD83 coordinates) of proposed MVDDS transmitting antenna
- Maximum EIRP per 24 MHz
- Height above average terrain of the transmitting antenna
- Type of antenna to be utilized
- Main beam azimuth and altitude orientation for the proposed transmitting antenna
- Theoretically modeled antenna radiation pattern
- Type(s) of emissions
- Description of the proposed service area.

If the proposed MVDDS antenna site does not meet the minimum spacing requirements on the date of original notification or on subsequent annual anniversary dates of non-operation as set

forth in §101.129 of this part, then the MVDDS licensee shall not construct the proposed transmission facility unless all NGSO FSS licensees having active subscribers within the minimum separation distance agree to a shorter spacing. Nothing in this section shall preclude MVDDS and NGSO FSS licensees from agreeing to accept the siting of new MVDDS transmitting antennas that do not meet the minimum distance set forth in §101.129 of this part. Incumbent point-to-point licensees (those not licensed as MVDDS) facilities are to be operated in the band 12,200-12,700 MHz following the procedures, technical standards, and requirements of § 101.105 of this part in order to protect stations providing Direct Broadcast Satellite Service.

**§101.105 Interference protection criteria.**

(a) \* \* \*

(4) 12.2-12.7 GHz band.

(i) To accommodate co-primary NGSO FSS earth stations in the 12.2-12.7 GHz band, the PFD of an MVDDS transmitting system must not exceed  $-135 \text{ dBW/m}^2$  in any 4 kHz band at a reference point at the surface of the earth at a distance greater than 3 kilometers from the MVDDS transmitting antenna.

(ii) To accommodate co-primary Direct Broadcast Satellite Service earth stations, an MVDDS transmitting system must not exceed the EPFD levels specified in paragraph (a)(4)(ii)(B) of this section at any DBS subscriber location in accordance with the procedures listed in § 101.1440 of this part.

(A) Definition of equivalent power flux density: The equivalent power flux density (EPFD) is the power flux density produced at a direct broadcast service (DBS) receive earth station, taking into account shielding effects and the off-axis discrimination of the receiving antenna assumed to be pointing at the appropriate DBS satellite(s) from the transmitting antenna of a multichannel video distribution and data service (MVDDS) transmit station. The EPFD in  $\text{dBW/m}^2$  in the reference bandwidth is calculated using the following formula:

$$EPFD = 10 * \log_{10} \left[ \frac{P_{out} * G_m(\theta_m, \phi_m) * G_e(\theta_e, \phi_e) * I}{G_{e,max} * 4 * \pi * d^2} \right]$$

Where:

$P_{out}$  = Total output power of the MVDDS transmitter (watts) into antenna

$G_m(\theta_m, \phi_m)$  = Gain of the MVDDS antenna in the direction of the DBS earth station

$G_e(\theta_e, \phi_e)$  = Gain of the earth station in the direction of the MVDDS antenna

I = Interference scaling factor for the earth station (1 dB for MVDDS transmitters employing the modulation discussed in Section 3.1.5 of the MITRE Report (*i.e.*, a QPSK modulated signal passed through a square-root raised cosine filter). For other modulation and filtering schemes, the interference scaling factor can be measured using the procedures described in Appendix A of the MITRE Report available at [http://www.fcc.gov/oet/info/mitrereport/mitrereport\\_4\\_01.pdf](http://www.fcc.gov/oet/info/mitrereport/mitrereport_4_01.pdf)).

$G_{e,max}$  = Maximum gain of the DBS earth station

d = the distance between the MVDDS transmitting antenna and the DBS earth station (meters)

(B) Regional equivalent power flux density levels:

(1) -168.4 dBW/m<sup>2</sup>/4kHz in the Eastern region consisting of the District of Columbia and the following states: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Alabama, Mississippi, Louisiana, and Florida.

(2) -169.8 dBW/m<sup>2</sup>/4kHz in the Midwestern region consisting of the following states: Ohio, Michigan, Indiana, Wisconsin, Illinois, Minnesota, Iowa, Missouri, Arkansas, South Dakota, Nebraska, Kansas, Oklahoma, and Texas

(3) -171.0 dBW/m<sup>2</sup>/4kHz in the Southwestern region consisting of the following states: Wyoming, Colorado, New Mexico, Utah, Arizona, Nevada, and California (south of 37° North Latitude).

(4) -172.1 dBW/m<sup>2</sup>/4kHz in the Northwestern region consisting of the following states: Washington, Oregon, California (north of 37° North Latitude), Idaho, Montana, North Dakota, Alaska, and Hawaii.

(iii) Except for public safety entities, harmful interference protection from MVDDS stations to incumbent point-to-point 12 GHz fixed stations is not required. Incumbent point-to-point private operational fixed 12 GHz stations, except for public safety entities, are required to protect MVDDS stations under the process described in § 101.103(d) of this part.

(5) All stations operating under this part must protect the radio quiet zones as required by § 1.924 of this chapter. Stations authorized by competitive bidding are cautioned that they must receive the appropriate approvals directly from the relevant quiet zone entity prior to operating.

**§ 101.107 Frequency tolerance.**

(a) \* \* \*

(6) Applicable to private operations fixed point-to-point microwave stations and stations providing MVDDS service.

**§101.109 Bandwidth.**

(c) \* \* \*

Frequency band (MHz)	Maximum authorized bandwidth
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* * * * *
12,200 to 12,700 <sup>8</sup>   500 megahertz
* * * * *

<sup>8</sup> For incumbent private operational fixed point-to-point stations in this band (those not licensed as MVDDS), the maximum bandwidth shall be 20 MHz.

**§101.111 Emission limitations.**

- (a) \* \* \*
- (2) \* \* \*
- (i) \* \* \*

MVDDS operations in the 12.2-12.7 GHz band shall use 24 megahertz for the value of B in the emission mask equation set forth in this section.

**§ 101.113 Transmitter power limitations.**

- (a) \* \* \*

Frequency Band (MHz)	Maximum allowable EIRP <sup>1,2</sup>	
	Fixed (dBW)	Mobile (dBW)
* * * * *		
12,200 to 12,700 <sup>10</sup> .....	+50	.....
* * * * *		

<sup>10</sup> The EIRP for MVDDS stations is limited to 14.0 dBm per 24 MHz (-16.0 dBW per 24 MHz). Incumbent point-to-point stations may use up to +50 dBW except for low power systems which were licensed under Section 101.147(q) of this part.

**§101.115 Directional antennas.**

- (c) \* \* \*

(9) Except for Temporary-fixed operations in the band 13200-13250 MHz with output powers less than 250 mW and as provided in Section 101.147(q) of this part, and except for antennas in the MVDDS service in the band 12.2-12.7 GHz.

**§101.129 Transmitter location.**

(b) In the 12.2-12.7 GHz band, licensees must not locate MVDDS transmitting antennas within 10 km of any qualifying NGSO FSS receiver unless mutual agreement is obtained between the MVDDS and NGSO FSS licensees. Such agreements must be retained by the licensees and made available for inspection by interested parties upon request.

(1) A qualifying NGSO FSS receiver, for the purposes of this section, is deemed to be one that is in regular use by an NGSO FSS subscriber for normal reception purposes in the 12.2-12.7 GHz band and not one for monitoring or testing purposes. In addition, qualifying receivers must either be in operation on the date or already be under construction and then operating within thirty days of the date that the MVDDS licensee notifies the NGSO FSS licensee of its intent to construct a new MVDDS transmitting antenna at a specified location.

(2) Except as provided in section (b)(3) below, the 10 kilometer spacing requirement for each MVDDS transmitting antenna site shall not apply with respect to NGSO FSS receivers that might be installed or become operational (except for those under construction and operating within thirty days as specified in paragraph (b)(1) of this section) subsequent to the original date that the MVDDS licensee provided notice of its intention to construct a given transmission facility.

(3) In the event that a proposed MVDDS transmitting antenna for which notice has been duly given to the NGSO FSS licensees has not been placed in normal operation **within one calendar year of the date of notice**, then the MVDDS licensee loses the benefit of the original notice. Upon such anniversary, the MVDDS licensees must re-determine compliance with the minimum 10 kilometer spacing requirement based upon locations of qualifying NGSO FSS receivers on that anniversary date. A new determination of compliance with the spacing requirement shall be made for each succeeding anniversary of non-operation for each proposed MVDDS transmission site or additional antenna. This provision contemplates that failure to commence normal operation at a given MVDDS transmitting antenna site within one year of the date of NGSO FSS notification may require successive relocations of the proposed transmitter site in order to meet the minimum spacing distance as determined on each anniversary of non-operation.

#### **§ 101.139 Authorization of transmitters.**

(a) \* \* \* Transmitters designed for use in the 31.0-31.3 GHz band and transmitters designed for MVDDS use in the 12,200-12,700 MHz band will be authorized under the verification procedure.

#### **§ 101.141 Microwave modulation.**

(a) Microwave transmitters employing digital modulation techniques and operating below 19.7 GHz (except for MVDDS stations in the 12,200-12,700 MHz band) must, with appropriate multiplex equipment, comply with the following additional requirements:

#### **§ 101.147 Frequency assignments.**

(a) \* \* \*

12,200-12,700 MHz (31)

\* \* \*

(31) This frequency band can be used for Multichannel Video Distribution and Data Service (MVDDS) shared with Direct Broadcast Satellite (DBS) Services on a co-primary non-harmful interference basis and on a co-primary basis with NGSO FSS satellite earth stations. Incumbent private operational fixed point-to-point licensees can also use these frequencies on a site by site basis.

(p) 12,000-12700 MHz. The Commission has allocated the 12.2-12.7 GHz band for use by the Direct Broadcast Satellite Service (DBS), the Multichannel Video Distribution and Data Service (MVDDS), and the Non-Geostationary Satellite Orbit Fixed Satellite Service (NGSO FSS). MVDDS shall be licensed on a non-harmful interference co-primary basis to existing DBS operations and on a co-primary basis with NGSO FSS stations in this band. MVDDS use can be on a common carrier and/or non-common carrier basis and can use channels of any desired bandwidth up to the maximum of 500 MHz provided the EIRP does not exceed 14 dBm per 24 megahertz. Private operational fixed point-to-point microwave stations authorized after September 9, 1983, are licensed on a non-harmful interference basis to DBS and are required to make any and all adjustments necessary to prevent harmful interference to operating domestic DBS receivers. Incumbent public safety licensees shall be afforded protection from MVDDS and NGSO FSS licensees, however all other private operational fixed licensees shall be secondary to DBS, MVDDS and NGSO FSS licensees. As of April 23, 2002, the Commission no longer accepts applications for new licenses for point-to-point private operational fixed stations in this band, however, incumbent licensees and previously filed applicants may file applications for minor modifications and amendments (as defined in § 1.929 of this chapter) thereto, renewals, transfer of control, or assignment of license. Notwithstanding any other provisions, no private operational fixed point-to-point microwave stations are permitted to cause harmful interference to broadcasting-satellite stations of other countries operating in accordance with the Region 2 plan for the Broadcasting-Satellite Service established at the 1983 WARC.

(q) Special provisions for incumbent low power, limited coverage systems in the band segments 12.2-12.7 GHz.

(1) As of April 23, 2002, the Commission no longer accepts applications for new stations in this service and incumbent stations may remain in service provided they do not cause harmful interference to any other primary services licensed in this band as described in paragraph (p) of this section. However, incumbent licensees and previously filed applicants may file applications for minor modifications and amendments (as defined in § 1.929 of this chapter) thereto, renewals, transfer of control, or assignment of license.

(2) Prior to December 8, 2000, notwithstanding any contrary provisions in this part, the frequency pairs 12.220/12.460 GHz, 12.260/12.500 GHz, 12.300/12.540 GHz and 12.340/12.580 GHz, were authorized for low power, limited coverage systems subject to the following provisions:

- (1) Maximum equivalent isotropically radiated power (EIRP) shall be 55 dBm;
- (2) The rated transmitter output power shall not exceed 0.5 watts;

- (3) Frequency tolerance shall be maintained to within 0.01 percent of the assigned frequency;
- (4) Maximum beamwidth shall not exceed 4 degrees. However, the sidelobe suppression criteria contained in § 101.115 of this part shall not apply, except that a minimum front-to-back ratio of 38 dB shall apply;
- (5) Upon showing of need, a maximum bandwidth of 12 MHz may be authorized per frequency assigned;
- (6) Radio systems authorized under the provisions of this section shall have no more than three hops in tandem, except upon showing of need, but in any event the maximum tandem length shall not exceed 40 km (25 miles);
- (7) Interfering signals at the receiver antenna terminals of stations authorized under this section shall not exceed -90 dBm and -70 dBm respectively, for co-channel and adjacent channel interfering signals, and
- (8) Stations authorized under the provisions of this section shall provide the protection from interference specified in § 101.105 of the part to stations operating in accordance with the provisions of this part.

### **Subpart P - Multichannel Video Distribution and Data Service Rules for the 12.2-12.7 GHz Band**

- 101.1401 Service areas.**
- 101.1403 Broadcast Carriage Requirements.**
- 101.1405 Channeling plan.**
- 101.1407 Permissible operations for MVDDS.**
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- 101.1440 MVDDS protection of DBS.**

#### **§ 101.1401 Service areas.**

Multichannel Video Distribution and Data Service (MVDDS) is licensed on the basis of Component Economic Areas (CEAs). The 354 CEA service areas are based on the 348 Component Economic Areas delineated by the U.S. Department of Commerce, with the following six FCC-defined service area additions: American Samoa, Guam, Northern Mariana Islands, San Juan (Puerto Rico), Mayagüez/Aguadilla-Ponce (Puerto Rico), and the United States Virgin Islands. Each CEA shall be licensed by auction to one licensee.

#### **§ 101.1403 Broadcast Carriage Requirements.**

MVDDS licensees are not required to provide all local television channels to subscribers within its area and thus are not required to comply with the must-carry rules, nor the local signal carriage requirements of the *Rural Local Broadcast Signal Act*. See Multichannel Video and

Cable Television Service Rules, Subpart D (Carriage of Television Broadcast Signals), 47 C.F.R. §§ 76.51-76.70. If an MVDDS licensee meets the statutory definition of Multiple Video Programming Distributor (MVPD), the retransmission consent requirement of § 325(b)(1) of the Communications Act of 1934, as amended (47 U.S.C. § 325(b)(1)) shall apply to that MVDDS licensee. Any MVDDS licensee that is an MVPD must obtain the prior express authority of a broadcast station before retransmitting that station's signal, subject to the exceptions contained in § 325(b)(2) of the Communications Act of 1934, as amended (47 U.S.C. § 325(b)(2)). Network nonduplication, syndicated exclusivity, sports blackout, and leased access rules shall not be imposed on MVDDS licensees.

#### **§ 101.1405 Channeling plan.**

Each license shall have one spectrum block of 500 megahertz per geographic area that can be divided into any size channels. Disaggregation is not allowed.

#### **§ 101.1407 Permissible operations for MVDDS.**

MVDDS licensees must use spectrum in the 12.2-12.7 GHz band for any digital fixed non-broadcast service (broadcast services are intended for reception of the general public and not on a subscribership basis) including one-way direct-to-home/office wireless service. Mobile and aeronautical services are not authorized. Two-way services may be provided by using other spectrum or media for the return or upstream path.

#### **§ 101.1409 Treatment of incumbent licensees.**

Terrestrial private operational fixed point-to-point licensees in the 12.2-12.7 GHz band which were licensed prior to MVDDS or NGSO FSS satellite stations are incumbent point-to-point stations and are not entitled to protection from harmful interference caused by later MVDDS or NGSO FSS entrants in the 12.2-12.7 GHz band, except for public safety stations which must be protected. MVDDS and NGSO FSS operators have the responsibility of resolving any harmful interference problems that their operations may cause to these public safety incumbent point-to-point operations in the 12.2-12.7 GHz band. Incumbent public safety terrestrial point-to-point licensees may only make minor changes to their stations without losing this protection. This does not relieve current point-to-point licensees of their obligation to protect BSS operations in the subject frequency band. All point-to-point applications, including low-power operations, for new licenses, major amendments to pending applications, or major modifications to existing licenses for the 12.2-12.7 GHz band are no longer accepted except for renewals and changes in ownership. See § 1.929 of this chapter for definitions of major and minor changes.

#### **§ 101.1411 Regulatory status and eligibility.**

(a) MVDDS licensees are permitted to provide one-way video programming and data services on a non-common carrier and/or on a common carrier basis. MVDDS is not required to be treated as a common carrier service unless it is providing non-Internet voice and data services through the public switched network.

(b) MVDDS licensees in the 12.2-12.7 GHz band are subject to the requirements set forth in § 101.7 of this part.

(c) Any entity, other than one precluded by § 101.7 and by § 101.1412 of this part, is eligible for authorization to provide MVDDS under this part. Authorization will be granted upon proper application filing in accordance with the Commission's Rules.

**§ 101.1412 MVDDS eligibility restrictions for cable operators.**

(a) Eligibility for MVDDS license. No cable operator, nor any entity owning an attributable interest in a cable operator, shall have an attributable interest in an MVDDS license if such cable operator's service area significantly overlaps the MVDDS license area, as "significantly overlaps" is defined in paragraph (e) of this section.

(b) Definition of cable operator. For the purposes of paragraph (a) of this section, the term "cable operator" means a company that is franchised to provide cable service, as defined in 47 C.F.R. § 76.5(ff) of the Commission's rules, in all or part of the MVDDS license area.

(c) For the purpose of this section, the term "MVPD household" refers to a household that subscribes to one or more Multichannel Video Program Distributors (MVPDs), as defined in 47 C.F.R. § 76.1000(e) of the Commission's rules.

(d) Waiver of restriction. Upon completion of the initial award of an MVDDS license, a cable operator may petition for a waiver of the restriction on eligibility based upon a showing that changed circumstances or new evidence indicate that no significant likelihood of substantial competitive harm will result from the operator retaining an attributable interest in the MVDDS license.

(e) Significant overlap with service area. For purposes of paragraph (a) of this section, significant overlap occurs when a cable operator's subscribers in the MVDDS license area make up thirty-five percent or more of the MVPD households in that MVDDS license area.

(f) Definition of attributable interest. For purposes of paragraph (a) of this section, an entity shall be considered to have an attributable interest in a cable operator or MVDDS licensee pursuant to the following criteria:

(1) A controlling interest shall constitute an attributable interest. Controlling interest means majority voting equity ownership, any general partnership interest, or any means of actual working control (including negative control) over the operation of the entity, in whatever manner exercised.

(2) Any general partnership interest in a partnership;

(3) Partnership and similar ownership interests (including limited partnership interests) amounting to 20 percent or more of the total partnership interests, calculated according to both the percentage of equity paid in and the percentage of distribution of profits and losses;

(4) Any stock interest amounting to 20 percent or more of the outstanding voting stock of an entity;

(5) Any voting or non-voting stock interest, amounting to 20 percent or more of the total outstanding stock of an entity;

(6) Stock interests held in trust that exceed the limit set forth in paragraph (f) of this section shall constitute an attributable interest of any person who holds or shares the power to vote such stock, of any person who has the sole power to sell such stock, and, in the case of stock held in trust, of any person who has the right to revoke the trust at will or to replace the trustee at will. If the trustee has a familial, personal, or extra-trust business relationship to the grantor or the beneficiary, the stock interests held in trust shall constitute an attributable interest of such grantor or beneficiary, as appropriate.

(7) Debt and interests such as warrants and convertible debentures, options, or other interests (except non-voting stock) with rights of conversion to voting interests shall not constitute attributable interests unless and until conversion is effected.

(8) An interest in a Limited Liability Company (LLC) or Registered Limited Liability Partnership (RLLP) amounting to 20 percent or more, shall constitute an attributable interest of each such limited partner.

(9) Officers and directors of a cable operator, an MVDDS licensee, or an entity that controls such cable operator or MVDDS licensee, shall be considered to have an attributable interest in such cable operator or MVDDS licensee.

(10) Ownership interests that are held indirectly by any party through one or more intervening corporations or other entities shall be determined by successive multiplication of the ownership percentages for each link in the vertical ownership chain and application of the relevant attribution benchmark to the resulting product, except that, if the ownership for any interest in any link in the chain exceeds 50 percent or represents actual control, it shall be treated as if it were a 100 percent interest.

(11) Any person who manages the operations of a cable operator or an MVDDS licensee pursuant to a management agreement shall be considered to have an attributable interest in such cable operator or MVDDS licensee, if such person or its affiliate has authority to make decisions or otherwise engage in practices or activities that determine, or significantly influence:

- (i) The nature or types of services offered by such entity;
- (ii) The terms upon which such services are offered; or
- (iii) The prices charged for such services.

(12) Any person or its affiliate who enters into a joint marketing arrangement with a cable operator, an MVDDS licensee, or an affiliate of such entity, shall be considered to have an attributable interest in such cable operator, MVDDS licensee, or affiliate, if such person or its affiliate has authority to make decisions or otherwise engage in practices or activities that determine:

- (i) The nature or types of services offered by such entity;
- (ii) The terms upon which such services are offered; or
- (iii) The prices charged for such services.

(g) Divestiture. Any cable operator, or any entity owning an attributable interest in a cable operator, that would otherwise be barred from acquiring an attributable interest in an MVDDS license by the eligibility restriction in paragraph (a) of this section, may be a party to an MVDDS application (*i.e.*, have an attributable interest in the applicant), and such applicant will be eligible for an MVDDS license, pursuant to the divestiture procedures set forth in paragraphs (g)(1) through (g)(6) of this section.

(1) Divestiture shall be limited to the following prescribed means:

(i) An MVDDS applicant holding an attributable interest in a cable operator may divest such interest in the cable company.

(ii) Other MVDDS applicants disqualified under paragraph (a), will be permitted to:

(A) Partition and divest that portion of the existing service area that causes it to exceed the overlap restriction in paragraph (a) of this section, subject to applicable regulations of state and local governments; or

(B) Partition and divest that portion of the MVDDS geographic service area that exceeds the overlap restriction in paragraph (a) of this section.

(iii) Divestiture may be to an interim trustee if a buyer has not been secured in the required period of time, as long as the MVDDS applicant has no interest in or control of the trustee and the trustee may dispose of the license as it sees fit.

(2) The MVDDS applicant shall certify as an exhibit to its short form application that it and all parties to the application will come into compliance with paragraph (a).

(3) If such MVDDS applicant is a successful bidder in an auction, it must submit with its long-form application a signed statement describing its efforts to date and future plans to come into compliance with the eligibility restrictions in paragraph (a) of this section.

(4) If such an MVDDS applicant is otherwise qualified, its application will be granted subject to a condition that the applicant shall come into compliance with the eligibility restrictions in paragraph (a), within ninety (90) days of final grant of such MVDDS license.

(5) An MVDDS applicant will be considered to have come into compliance with paragraph (a) of this section if:

(i) In the case of the divestiture of a portion of an MVDDS license service area, it has successfully completed the assignment or transfer of control of the requisite portion of the MVDDS geographic service area.

(ii) In all other cases, it has submitted to the Commission a signed certification that it has come into compliance with paragraph (a) of this section by the following means, identified in such certification:

(A) By divestiture of a disqualifying interest in a cable operator, identified in terms of the interest owned, the owner of such interest (and, if such owner is not the applicant itself, the relationship of the owner to the applicant), the name of the party to whom such interest has been divested, and the date such divestiture was executed; or

(B) By divestiture of the requisite portion of the cable operator's existing service area, identified in terms of the name of the party to whom such interest has been divested, the date such divestiture was executed, the name of any regulatory agency that must approve such divestiture, and the date on which an application was filed for this purpose with the regulatory agency.

(6) If no such certification or application is tendered to the Commission within ninety (90) days of final grant of the initial license, the Commission may cancel or rescind the license automatically, shall retain all monies paid to the Commission, and, based on the facts presented, shall take any other action it may deem appropriate.

Note 1 to paragraph (f)(6): Waivers of § 101.1014(f)(6) may be granted upon an affirmative showing:

(1) That the interest holder has less than a fifty percent voting interest in the licensee and there is an unaffiliated single holder of a fifty percent or greater voting interest;

(2) That the interest holder is not likely to affect the local market in an anticompetitive manner;

(3) That the interest holder is not involved in the operations of the licensee and does not have the ability to influence the licensee on a regular basis; and

(4) That grant of a waiver is in the public interest because the benefits to the public of common ownership outweigh any potential anticompetitive harm to the market.

### **§ 101.1413 License term and renewal expectancy.**

(a) The MVDDS license term is ten years, beginning on the date of the initial authorization grant.

(b) Application of a renewal expectancy is based on the substantial service requirement which is defined as a service that is sound, favorable, and substantially above a level of mediocre service which might minimally warrant renewal. At the end of the license term, the Commission will consider factors such as:

(1) whether the licensee's operations service niche markets or focus on serving populations outside of areas serviced by other MVDDS licensees;

(2) whether the licensee's operations serve populations with limited access to telecommunications services; and

(3) a demonstration of service to a significant portion of the population or land area of the licensed area.

(c) The renewal application of an MVDDS licensee must include the following showings in order to claim a renewal expectancy:

(1) a coverage map depicting the served and unserved areas;

(2) a corresponding description of current service in terms of geographic coverage and population served or transmitter locations in the served areas; and

(3) copies of any Commission Orders finding the licensee to have violated the Communications Act or any Commission rule or policy and a list of any pending proceedings that relate to any matter described by the requirements for the renewal expectancy.

#### **§ 101.1415 Partitioning and Disaggregation.**

(a) MVDDS licensees are permitted to partition licensed geographic areas along county borders (Parishes in Louisiana or Territories in Alaska). Disaggregation will not be permitted by MVDDS licensees in the 12.2-12.7 GHz band. "Partitioning" is the assignment of geographic portions of a license along geopolitical or other boundaries. "Disaggregation" is the assignment of discrete portions or "blocks" of spectrum licensed to a geographic licensee or qualifying entity.

(b) *Eligibility.*

(1) Parties seeking approval for partitioning shall request from the Commission an authorization for partial assignment of a license pursuant to § 1.948 of this chapter.

(2) MVDDS licensees may apply to the Commission to partition their licensed geographic service areas to eligible entities and are free to partition their licensed spectrum at any time following the grant of a license.

(3) Any existing frequency coordination agreements shall convey with the assignment of the geographic area or spectrum, and shall remain in effect for the term of the agreement unless new agreements are reached.

(c) *Technical standards.*

(1) Partitioning. In the case of partitioning, applicants and licensees must file FCC Form 603 pursuant to § 1.948 of this chapter and list the partitioned service area on a schedule to the application.

(2) The geographic coordinates must be specified in degrees, minutes, and seconds to the nearest second of latitude and longitude and must be based upon the 1983 North American Datum (NAD83).

(d) *Unjust enrichment.* 12 GHz licensees that received a bidding credit and partition their licenses to entities not meeting the eligibility standards for such a bidding credit, will be subject to the provisions concerning unjust enrichment as set forth in § 1.2111 of this chapter.

(e) *License term.* The MVDDS license term is ten years, beginning on the date of the initial authorization grant. The license term for a partitioned license area shall be the remainder of the original licensee's license term as provided for in § 101.1413 of this part.

(f) *Construction requirements.* Applications requesting approval for partitioning must include a certification by each party stating that one or both parties will satisfy the construction requirement set forth in § 101.1413 of this part. Failure by a party to meet its respective construction requirement will result in the automatic cancellation of its license without further Commission action.

#### **§ 101.1417 Annual report.**

Each MVDDS licensee shall file with the Public Safety & Private Wireless Division of the Wireless Telecommunications Bureau of the Commission two copies of a report by March 1 of each year for the preceding calendar year. This report must include the following:

- (1) name and address of licensee;
- (2) station(s) call letters and primary geographic service area(s); and
- (3) the following statistical information for the licensee's station (and each channel thereof):
  - (i) the total number of separate subscribers served during the calendar year;
  - (ii) the total hours of transmission service rendered during the calendar year to all subscribers;
  - (iii) the total hours of transmission service rendered during the calendar year involving the transmission of local broadcast signals; and
  - (iv) a list of each period of time during the calendar year in which the station rendered no service as authorized, if the time period was a consecutive period longer than 48 hours, and

**§ 101.1421 Coordination of adjacent area MVDDS stations and incumbent public safety POFS stations.**

(a) MVDDS licensees in the 12.2-12.7 GHz band are required to develop sharing and protection agreements based on the design and architecture of their systems, in order to ensure that no harmful interference occurs between adjacent geographical area licensees. MVDDS licensees shall:

(1) Engineer systems to be reasonably compatible with adjacent and co-channel operations in the adjacent areas on all its frequencies; and

(2) Cooperate fully and in good faith to resolve interference and transmission problems that are present on adjacent and co-channel operations in adjacent areas.

(b) Harmful interference to public safety stations, co-channel MVDDS stations operating in adjacent geographic areas, and stations operating on adjacent channels to MVDDS stations is prohibited. In areas where the CEAs are in close proximity, careful consideration should be given to power requirements and to the location, height, and radiation pattern of the transmitting and receiving antennas. Licensees are expected to cooperate fully in attempting to resolve problems of potential interference before bringing the matter to the attention of the Commission.

(c) Licensees shall coordinate their facilities whenever the facilities have optical line-of-sight into other licensees' areas or are within the same geographic area. Licensees are encouraged to develop operational agreements with relevant licensees in the adjacent geographic areas. Incumbent public safety POFS licensee(s) shall retain exclusive rights to its channel(s) within the relevant geographical areas and must be protected in accordance with the procedures in § 101.103 of this part. A list of public safety incumbents is attached as Appendix I to the Memorandum Opinion and Order and

Second Report and Order, Docket 98-206 released April 23, 2002. Please check with the Commission for any updates to that list.

**§ 101.1423 Canadian and Mexican coordination.**

Pursuant to § 2.301 of this chapter, MVDDS systems in the United States within 56 km (35 miles) of the Canadian and Mexican border will be granted conditional licenses, until final international agreements are approved. These systems may not cause harmful interference to stations in Canada or Mexico. MVDDS stations must comply with the procedures outlined under § 101.147(p) of this part and §§ 1.928(f)(1) and (2) of this chapter until final international agreements concerning MVDDS are signed. Section 1.928(f) of this chapter states that transmitting antennas can be located as close as five miles (eight kilometers) of the border if they point within a sector of 160 degrees away from the border, and as close as thirty-five miles (fifty-six kilometers) of the border if they point within a sector of 200 degrees toward the border without coordination with Canada. MVDDS licensees shall apply this method near the Canadian and Mexican borders. No stations are allowed within 5 miles of the borders.

**§ 101.1425 RF safety.**

MVDDS stations in the 12.2-12.7 GHz frequency band do not operate with output powers that equal or exceed 1640 watts EIRP and therefore will not be subject to the routine environmental evaluation rules for radiation hazards, as set forth in § 1.1307 of this chapter.

**§ 101.1427 MVDDS licenses subject to competitive bidding.**

Mutually exclusive initial applications for MVDDS licenses in the 12.2-12.7 GHz band are subject to competitive bidding. The general competitive bidding procedures set forth in Part 1, Subpart Q of this chapter will apply unless otherwise provided in this subpart.

**§ 101.1429 Designated entities.**

*(a) Eligibility for small business provisions.*

(1) A very small business is an entity that, together with its controlling interests and affiliates, has average annual gross revenues not exceeding \$3 million for the preceding three years.

(2) A small business is an entity that, together with its controlling interests and affiliates, has average annual gross revenues not exceeding \$15 million for the preceding three years.

(3) An entrepreneur is an entity that, together with its controlling interests and affiliates, has average annual gross revenues not exceeding \$40 million for the preceding three years.

(4) A consortium of very small businesses is a conglomerate organization formed as a joint venture between or among mutually independent business firms, each of which individually satisfies the definition in paragraph (a)(1) of this section. A consortium of small businesses is a conglomerate organization formed as a joint venture between or among mutually independent business firms, each of which individually satisfies the definition in paragraph (a)(2) of this section. A consortium of entrepreneurs is a conglomerate organization formed as a joint venture between or among mutually independent business firms, each of which individually satisfies the definition in paragraph (a)(3) of this section.

(5) For purposes of determining whether an entity meets any of the definitions set forth in paragraphs (a)(1), (a)(2), (a)(3), or (a)(4) of this section, the gross revenues of the entity, its controlling interests and affiliates shall be considered in the manner set forth in §§ 1.2110(b) and (c) of this chapter.

(b) *Bidding credits.* A winning bidder that qualifies as a very small business or a consortium of very small businesses as defined in this section may use the bidding credit specified in § 1.2110(f)(2)(i) of this chapter. A winning bidder that qualifies as a small business or a consortium of small businesses as defined in this section may use the bidding credit specified in § 1.2110(f)(2)(ii) of this chapter. A winning bidder that qualifies as an entrepreneur or a consortium of entrepreneurs as defined in this section may use the bidding credit specified in § 1.2110(f)(2)(iii) of this chapter.

#### **§ 101.1440 MVDDS protection of DBS.**

(a) An MVDDS licensee shall not begin operation unless it can ensure that the EPFD from its transmitting antenna at all DBS customers of record locations is below the values listed for the appropriate region in Section 101.105(a)(4)(ii)(B) of this part. Alternatively, MVDDS licensees may obtain a signed written agreement from DBS customers of record stating that they are aware of and agree to their DBS system receiving MVDDS signal levels in excess of the appropriate EPFD limits specified in § 101.105(a)(4)(ii)(B) of this part. DBS customers of record are those who had their DBS receive antennas installed prior to or within the 30 day period after notification to the DBS operator by the MVDDS licensee of the proposed MVDDS transmitting antenna site.

(b) MVDDS licensees are required to conduct a survey of the area around its proposed transmitting antenna site to determine the location of all DBS customers of record that may potentially be affected by the introduction of its MVDDS service. The MVDDS licensee must assess whether the signal levels from its system, under its deployment plans, would exceed the appropriate EPFD levels in § 101.105(a)(4)(ii)(B) of this part at any DBS customer of record location. Using EPFD calculations, terrain and building structure characteristics, and the survey results, an MVDDS licensee must make a determination of whether its signal level(s) will exceed the EPFD limit at any DBS customer of record sites. To assist in making this determination, the MVDDS provider can use the EPFD contour model developed by the Commission and described in Appendix J of the *Memorandum Opinion and Order and Second Report and Order*, ET Docket 98-206 or on the OET website at <http://www.fcc.gov/oet/dockets/et98-206>.

(c) If the MVDDS licensee determines that its signal level will exceed the EPFD limit at any DBS customer site, it shall take whatever steps are necessary, up to and including finding a new transmit site, to ensure that the EPFD limit will not be exceeded at any DBS customer location.

(d) Coordination between MVDDS and DBS licensees.

(1) At least 90 days prior to the planned date of MVDDS commencement of operations, the MVDDS licensee shall provide the following information to the DBS licensee(s):

- (i) Geographic location (including NAD 83 coordinates) of its proposed station location;
- (ii) Maximum EIRP of each transmitting antenna system;
- (iii) Height above ground level for each transmitting antenna;
- (iv) Antenna type along with main beam azimuth and altitude orientation information, and description of the antenna radiation pattern;
- (v) Description of the proposed service area; and
- (v) Survey results along with a technical description of how it determined compliance with the appropriate EPFD level at all DBS subscriber locations.

(2) No later than forty-five days after receipt of the MVDDS system information in (d)(1), the DBS licensee(s) shall provide the MVDDS licensee with a list of any new DBS customer locations that have been installed in the 30-day period following the MVDDS notification. In addition, the DBS licensee(s) could indicate agreement with the MVDDS licensee's technical assessment, or identify DBS customer locations that the MVDDS licensee failed to consider or DBS customer locations where they believe the MVDDS licensee erred in its analysis and could exceed the prescribed EPFD limit.

(3) Prior to commencement of operation, the MVDDS licensee must take into account any new DBS customers or other relevant information provided by DBS licensees in response to the notification in (d)(1).

(e) Beginning thirty days after the DBS licensees are notified of a potential MVDDS site under (d)(1), the DBS licensees have the responsibility of ensuring that all future installed DBS receive antennas on its system are located in such a way as to avoid the MVDDS signal. These later installed receive antennas shall have no further rights of complaint against the notified MVDDS transmitting antenna(s).

(f) In the event of either an increase in the EPFD contour in any direction or a major modification as defined in § 1.929 of this chapter, such as the addition of an antenna, to an MVDDS station, the procedures of paragraphs (d) and (e) of this section and **rights of complaint begin anew**. Exceptions to this are renewal, transfer of control, and assignment of license applications.

(g) Interference complaints. The MVDDS licensee must satisfy all complaints of interference to DBS customers of record which are received during a **one year period** after commencement of operation of the transmitting facility. Specifically, the MVDDS licensee must correct interference caused to a DBS customer of record or cease operation if it is demonstrated that the DBS customer is receiving harmful interference from the MVDDS system or that the MVDDS signal exceeds the permitted EPFD level at the DBS customer location.