

APPENDIX A: PETITIONS FOR RECONSIDERATION, REPLIES AND OPPOSITIONS**Petitions for Reconsideration Filed March 12, 2001**

SkyTower, Inc. (SkyTower)

Petitions for Reconsideration Filed March 19, 2001

The Boeing Company (Boeing)

DirecTV, Inc. (DirecTV)

EchoStar Satellite Corporation (EchoStar)

Hughes Communications, Inc., *et. al.* (Joint Petition.) (Hughes)

PanAmSat Corporation (PanAmSat)

Satellite Broadcasting and Communications Association (SBCA)

SkyBridge, L.L.C. (SkyBridge)

Oppositions to Petitions for Reconsideration Filed March 29, 2001

Satellite Receivers Ltd., (SRL)

Oppositions to Petitions for Reconsideration Filed April 24, 2001

The Boeing Company (Boeing)

MDS America, Incorporated (MDSA)

Northpoint Technology, Ltd. (Northpoint)

PanAmSat Corporation (PanAmSat)

SkyBridge, L.L.C. (SkyBridge)

Replies to Oppositions to Petitions for Reconsideration Filed May 4, 2001

SkyBridge L.L.C. (SkyBridge)

SkyTower, Inc. (SkyTower)

Replies to Oppositions to Petitions for Reconsideration Filed May 9, 2001

PanAmSat Corporation (PanAmSat)

Satellite Broadcasting and Communications Association (SBCA)

DirecTV, Inc. (DirecTV)

EchoStar Satellite Corporation (EchoStar)

The Boeing Company (Boeing)

APPENDIX B: COMMENTING PARTIES TO FNPRM**COMMENTS** (Due on March 12, 2001)

Association of America's Public Television Stations (APTS)

AT&T Corp. (AT&T)

The Boeing Company (Boeing)

DirecTV, Inc. (DirecTV)

EchoStar Satellite Corporation (EchoStar)

Gray Communications (Gray)

Joint Broadcasters

(Benedek Broadcasting Corporation, Corridor Television, L.L.P., Eagle III Broadcasting, L.L.C.,

Granite Broadcasting Corporation, LIN Television Corporation)

MDS America, Incorporated (MDSA)

Minority Media and Telecommunications Council (MMTC)

Minority Media and Telecommunications Council – Supplement (MMTC Supplement)

National Rural Telecommunications Cooperative (NRTC)

National Indian Telecommunications Institute (NITI)

Northpoint Technology, Ltd. and Broadwave USA, Inc. (Northpoint)

Paxson Communications (Paxson)

Pegasus Broadband Corporation (Pegasus)

Pegasus Broadband Corporation - Technical Supplement (Pegasus Technical Supplement)

Satellite Broadcasting and Communications Association (SBCA)

Satellite Receivers, Ltd. (SRL)

Second Generation of Iowa (SGI)

SkyBridge, L.L.C. (SkyBridge)

SkyTower, Inc. (SkyTower)

Society of Broadcast Engineers (SBE)

Telesat Canada (Telesat)

Virtual Geosatellite

REPLY COMMENTS (Originally due on March 26; date extended to April 5, 2001)

Association of America's Public Television Stations (APTS)

AT&T Corp. (AT&T)

The Boeing Company (Boeing)

Consumers Union, Consumer Federation of America, Leadership Conference on Civil Rights, Center for Media Education, League of United Latin American Citizens, the Media Access Project (CU *et al.*)

DirecTV, Inc. (DirecTV)

EchoStar Satellite Corporation (EchoStar)

MDS America, Incorporated (MDSA)

National Association of Black Owned Broadcasters (NABOB)

National Association of Broadcasters (NAB)

National Rural Telecommunications Cooperative (NRTC)

Northpoint Technology, Ltd. and Broadwave USA, Inc. (Northpoint)

Pegasus Broadband Corporation (Pegasus)

Rural Telecommunications Group (RTG)

Satellite Broadcasting and Communications Association (SBCA)

Satellite Receivers, Ltd. (Satellite Receivers)

SkyBridge, L.L.C. (SkyBridge)

APPENDIX C: COMMENTING PARTIES TO MITRE REPORT**COMMENTS:** (Due on May 15, 2001)

Boeing Company
Conus Communications
DirecTV, Inc.
EchoStar Satellite Corporation
Northpoint Technology and Broadwave USA, Inc.
Pegasus Broadband Corporation
Satellite Broadcasting and Communications Association

REPLY COMMENTS: (Due on May 23, 2001)

AT&T Corporation
DirecTV, Inc.
EchoStar Satellite Corporation
MDS America
Northpoint Technology and Broadwave USA, Inc.
Pegasus Broadband Corporation
Satellite Broadcasting and Communications Association
Satellite Receivers, Ltd.

APPENDIX D: FINAL RULES

For the reasons discussed in the preamble, the FCC amends 47 C.F.R. Parts 25 and 101 as follows:

PART 25 – SATELLITE COMMUNICATIONS

1. The authority citation for Part 25 continues to read as follows:

AUTHORITY: 47 U.S.C. 701-744. Interprets or applies sec. 303. 47 U.S.C. sections 154, 301, 302, 303, 307, 309, and 332, unless otherwise noted.

2. Section 25.208 is amended by adding new paragraph (k) to read as follows:

§ 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/m²) 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/m²) 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.

* * * * *

3. Section 25.139 is added to read as follows:

§ 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

4. The authority citation for Part 101 continues to read as follows:

AUTHORITY: 47 U.S.C. 154, 303.

5. Section 101.3 is amended by adding a definition for MVDDS in alphabetical order to read as follows:

§ 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.

* * * * *

6. Section 101.101 is amended by revising the entry for 12,200-12,700 MHz in the table to read as follows:

§ 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	

* * * * *

7. Section 101.103 is amended by revising paragraph (f) to read as follows:

§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.

8. Section 101.105 is amended by adding paragraphs (a)(4) and (a)(5) and revising paragraph (d) by adding the phrase "for incumbent non-MVDDS stations" after the words "12,200-12,700 MHz band" to read as follows:

§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 dBW/m² 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 dBW/m² 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).

$G_{e,max}$ = 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/m²/4kHz 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/m²/4kHz 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/m²/4kHz 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/m²/4kHz 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.

* * * * *

9. Section 101.107 is amended by revising footnote 6 to the Table in paragraph (a) to read as follows:

§ 101.107 Frequency tolerance.

(a) * * *

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

* * * * *

10. Section 101.109 is amended by revising the entry for 12,200-12,700 MHz and by adding footnote 8 in the Table at the end of the section to read as follows:

§101.109 Bandwidth.

* * * * *

(c) * * *

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

* * *

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

* * * * *

11. Section 101.111 is amended by adding a footnote immediately after the definition of "B" in paragraph (a)(2)(i) to read as follows:

§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.

12. Section 101.113 is amended by revising the entry for 12,200-12,700 MHz in the table and adding a new footnote 10 to the table in paragraph (a) to read as follows:

§ 101.113 Transmitter power limitations.

(a) * * *

Frequency Band (MHz)	Maximum allowable EIRP ^{1, 2}	
	Fixed (dBW)	Mobile (dBW)
* * * * *		
12,200 to 12,700 ¹⁰	+50

Frequency Band (MHz)	Maximum allowable EIRP ^{1,2}	
	Fixed (dBW)	Mobile (dBW)
* * * * *		

* * *

¹⁰ 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.

* * * * *

13. Section 101.115 is amended by revising footnote 9 to the table in paragraph (c) to read as follows:

§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.

* * * * *

14. Section 101.129 is revised by amending paragraph (b) to read as follows:

§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.

15. Section 101.139 is amended by revising the last sentence of paragraph (a) to read as follows:

§ 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.

* * * * *

16. Section 101.141 is amended by revising the first sentence of paragraph (a) to read as follows:

§ 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:

* * * * *

17. Section 101.147 is amended by removing the entries for 12,200-12,500 megahertz and 12,500-12,700 MHz, adding a new entry for 12,200-12,700 MHz, and adding a new footnote 31 in the frequency assignment table in paragraph (a), and revising paragraphs (p) and (q) to read as follows:

§ 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) 12,000-12,700 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 **[the release date of this order]** 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 **[the release date of this order]** 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.

18. Section 101.601 is amended by adding a sentence at the end of the introductory paragraph to read as follows:

§ 101.601 Eligibility.

* * * This subpart shall not apply to stations offering MVDDS in the 12.2-12.7 GHz band.

* * * * *

19. A new subpart P is added to read as follows:

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.
- 101.1409 Treatment of incumbent licensees.
- 101.1411 Regulatory status and eligibility.
- 101.1412 MVDDS eligibility restrictions for DBS operators and cable systems.
- 101.1413 License term and renewal expectancy.
- 101.1415 Partitioning and disaggregation.
- 101.1417 Annual report.
- 101.1421 Coordination of adjacent area MVDDS stations.
- 101.1423 Canadian and Mexican coordination.
- 101.1425 RF safety.
- 101.1427 MVDDS licenses subject to competitive bidding.
- 101.1429 Designated entities.
- 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/Agua-dilla-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 a re 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 [release date of order]. 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 EFPD 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 EFPD 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 EFPD levels in § 101.105(a)(4)(ii)(B) of this part at any DBS customer of record location. Using EFPD 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 EFPD limit at any DBS customer of record sites. To assist in making this determination, the MVDDS provider can use the EFPD 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 EFPD 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 EFPD 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) 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.

APPENDIX E: FINAL REGULATORY FLEXIBILITY ANALYSIS

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),⁶⁴³ an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the 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 12.2-12.7 GHz 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 12.2-12.7 GHz Band, *First Report and Order and Further Notice of Proposed Rule Making*.⁶⁴⁴ The Commission sought written public comment on the proposals in the *Further Notice* including comment on the IRFA. This Final Regulatory Flexibility Analysis (FRFA) examines the possible significant economic impact of our actions on small entities and conforms to the RFA.⁶⁴⁵

A. Need for, and Objectives of, the *Second Report and Order*

2. By this action, Multichannel Video Data and Distribution Service (MVDDS) providers will share the 12.2-12.7 GHz band with new NGSO FSS operators on a co-primary basis and on a non-harmful interference basis with incumbent direct broadcast satellite (DBS) providers. The objective of this *Second Report and Order* is to adopt licensing, service and technical rules for the MVDDS. Specifically, we seek: (1) to accommodate the introduction of innovative services; and (2) to facilitate the sharing and efficient use of spectrum. Furthermore, the rules adopted in this *Second Report and Order* are designed to implement Congress's goal of giving small businesses the opportunity to participate in the provision of spectrum-based services in accordance with Section 309(j) of the Communications Act of 1934, as amended.⁶⁴⁶ Thus, we believe that this service will facilitate the delivery of communications services, such as video and broadband services, to various populations including those that are deemed to be unserved and/or underserved.

B. Summary of Significant Issues Raised by Public Comments In Response to the IRFA

3. Although we did not receive any comments in direct response to the IRFA, commenters suggested approaches that would foster participation in the MVDDS service by smaller entities. For instance, several commenters favored allowing MVDDS licensees to partition their geographic service areas into smaller areas.⁶⁴⁷ In addition, the Rural Telecommunications Group (RTG) suggested the use of smaller service areas – Metropolitan Statistical Areas (MSAs), Rural Service Areas (RSAs) or Component Economic Areas (CEAs) – to facilitate opportunities for small and rural carriers to obtain MVDDS licenses and to ensure that rural regions benefit from the 12.2-12.7 GHz band.⁶⁴⁸ Likewise,

⁶⁴³ See 5 U.S.C. § 603. The RFA, see 5 U.S.C. § 601 *et. seq.*, has been amended by the *Contract With America Advancement Act of 1996*, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA). Title II of the CWAAA is the *Small Business Regulatory Enforcement Fairness Act of 1996* (SBREFA).

⁶⁴⁴ *First R&O and Further Notice*, 16 FCC Rcd at 4269 (2001).

⁶⁴⁵ See 5 U.S.C. § 604.

⁶⁴⁶ 47 U.S.C. §§ 257, 309(j)(Communications Act).

⁶⁴⁷ See, e.g., MDS America Reply Comments at 14; Northpoint Comments at 33; Pegasus Comments at 19; Satellite Receivers Ltd. Comments at 4.

⁶⁴⁸ See RTG Reply Comments at 2-3.

Pegasus supported licensing MVDDS on the basis of basic trading areas (BTAs) and major trading areas (MTAs) because the population served would be smaller and the cost of licenses likely lower, thus providing greater economic opportunity for a wider variety of applicants.⁶⁴⁹ Thus, the need to establish opportunities for smaller entities to have access to MVDDS spectrum was a sentiment expressed by various commenters in the MVDDS rule making proceeding.

C. Description and Estimate of the Number of Small Entities to Which the Rules Will Apply

4. The RFA directs agencies to provide a description of, and, where feasible an estimate of, the number of small entities that may be affected by the rules adopted herein.⁶⁵⁰ The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."⁶⁵¹ In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.⁶⁵² A small business concern is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).⁶⁵³

5. *Small Multichannel Video Programming Distributors (MVPDs)*. SBA has developed a definition of small entities for cable, which includes all such companies generating \$11 million or less in annual receipts.⁶⁵⁴ This definition includes cable system operators and DBS services. According to the Census Bureau data from 1992, there were 1,758 total cable and other pay television services and 1,423 had less than \$11 million in revenue.⁶⁵⁵ We address below each service individually to provide a more precise estimate of small entities.

Cable Services. The Commission has developed, with SBA's approval, our own definition of a small cable system operator for the purposes of rate regulation. Under the Commission's rules, a "small cable company" is one serving 400,000 or fewer subscribers nationwide.⁶⁵⁶ We last estimated that there were 1439 cable operators that qualified as small cable companies.⁶⁵⁷ Since then, some of those companies may have grown to serve over 400,000 subscribers, and others may have been involved in transactions that caused them to be combined with other cable operators. Consequently, using this definition, we estimate that there are fewer than 1439 small

⁶⁴⁹ See Pegasus Comments at 14-15; Pegasus Reply Comments at 15.

⁶⁵⁰ 5 U.S.C. § 603(b)(3).

⁶⁵¹ 5 U.S.C. § 601(6).

⁶⁵² 5 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in 15 U.S.C. § 632). Pursuant to the RFA, the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register." 5 U.S.C. § 601(3).

⁶⁵³ Small Business Act, 15 U.S.C. § 632 (1996).

⁶⁵⁴ 13 C.F.R. § 121.201 (Cable Networks (NAICS 513210) Cable and Other Program Distribution (NAICS 513220)).

⁶⁵⁵ *Id.* (U.S. Department of Commerce, Bureau of the Census, Industry and Enterprise Receipts Size Report, Table) (Bureau of the Census data under contract to the Office of Advocacy of the SBA).

⁶⁵⁶ 47 C.F.R. § 76.901(e). The Commission developed this definition based on its determinations that a small cable system operator is one with annual revenues of \$100 million or less. *Sixth Report and Order and Eleventh Order on Reconsideration*, MM Docket Nos. 92-266 and 93-215, 10 FCC Rcd 7393 (1995).

⁶⁵⁷ Paul Kagan Associates, Inc., Cable TV Investor, Feb. 29, 1996 (based on figures for Dec. 30, 1995).

entity cable system operators that may be affected by the decisions and rules adopted in this *Second Report and Order*.

The Communications Act defines a small cable system operator as "a cable operator that, directly or through an affiliate, serves in the aggregate fewer than one percent of all subscribers in the United States and is not affiliated with any entity or entities whose gross annual revenues in the aggregate exceed \$250,000,000."⁶⁵⁸ The Commission has determined that there are 61,700,000 subscribers in the United States. Therefore, an operator serving fewer than 617,000 subscribers shall be deemed a small operator under the Communications Act definition, if its annual revenues, when combined with the total annual revenues of all of its affiliates, do not exceed \$250 million in the aggregate. Based on available data, we find that the number of cable operators serving 617,000 subscribers or less totals approximately 1450.⁶⁵⁹ Although it seems certain that some of these cable system operators are affiliated with entities whose gross annual revenues exceed \$250,000,000, we are unable at this time to estimate with greater precision the number of cable system operators that would qualify as small cable operators under the definition in the Communications Act.

DBS Service. Because DBS provides subscription services, DBS falls within the SBA definition of Cable Networks (NAIC 513210) and Cable and Other Program Distribution (NAIC 513220). This definition provides that a small entity is expressed as one with \$11 million or less in annual receipts. The operational licensees of DBS services in the United States are governed by Part 100 of the Commission's Rules. The Commission, however, does not collect annual revenue data for DBS and, therefore, is unable to ascertain the number of small DBS licensees meeting this definition that could be impacted by these rules. DBS service requires a great investment of capital for operation, and we acknowledge that there are entrants in this field that may not yet have generated \$11 million in annual receipts, and therefore may be categorized as a small business by the SBA, if independently owned and operated.

6. *Auxiliary, Special Broadcast and other program distribution services.* This service involves a variety of transmitters, generally used to relay broadcast programming to the public (through translator and booster stations) or within the program distribution chain (from a remote news gathering unit back to the station). The Commission has not developed a definition of small entities applicable to broadcast auxiliary licensees. Therefore, the applicable definition of small entity is the definition under the SBA rules applicable to radio networks (NAICS 513111), radio stations (NAICS 513112), and television broadcasting (NAICS 513120). These definitions provide, respectively, that a small entity is one with either \$5 million or less in annual receipts or \$10.5 million in annual receipts. The numbers of these stations are very small. The Commission does not collect financial information on these auxiliary broadcast facilities. We believe, however, that most, if not all, of these auxiliary facilities could be classified as small businesses by themselves. We also recognize that most of these types of services are owned by a parent station which, in some cases, would be covered by the revenue definition of small business entity discussed above. These stations would likely have annual revenues that exceed the SBA maximum to be designated as a small business (as noted, either \$5 million for a radio station or \$10.5 million for a TV station). Furthermore, they do not meet the SBA's definition of a "small business concern" because they are not independently owned and operated.

7. *Private Operational Fixed Service.* Incumbent microwave services in the 12.2-12.7 GHz bands include common carrier, private operational fixed (POF), and BAS services. Presently, there are approximately 22,015 common carrier licensees, and approximately 61,670 POF licensees and broadcast auxiliary radio licensees in the microwave service. Inasmuch as the Commission has not yet defined a small business with respect to these incumbent microwave services, we will utilize the

⁶⁵⁸ 47 U.S.C. § 543(m)(2).

⁶⁵⁹ Paul Kagan Associates, Inc., Cable TV Investor, Feb. 29, 1996 (based on figures for Dec. 30, 1995).

SBA's definition applicable to cellular and other wireless telecommunications companies (NAICS 513322); *i.e.*, an entity with no more than 1500 persons. We estimate, for this purpose, that all of the Fixed Microwave licensees (excluding broadcast auxiliary licensees) would qualify as small entities under the SBA definition for radiotelephone companies.

8. The rules set forth in this *Second Report and Order* will affect all entities that intend to provide terrestrial MVDDS operations in the 12.2-12.7 GHz band. In this *Second Report and Order*, we state that licensees are permitted to use MVDDS spectrum for, among other things, fixed one-way direct-to-home/business video and data services.

9. Additionally, in the *Second Report and Order*, we adopt definitions for three tiers of small businesses for the purpose of providing bidding credits to small entities. Specifically, we define the three tiers of small businesses as follows: an "entrepreneur" is an entity with average annual gross revenues not exceeding \$40 million for the preceding three years; a "small business" is an entity with average annual gross revenues not exceeding \$15 million for the preceding three years; and a "very small business" is an entity with average annual gross revenues not exceeding \$3 million for the preceding three years.⁶⁶⁰ We will not know how many auction participants or licensees will qualify under these definitions as entrepreneurs, small businesses, or very small businesses until an auction is held. However upon reviewing the record in the MVDDS proceeding, we assume that, for purposes of our evaluations and conclusions in the FRFA, a number of the prospective licensees will be entrepreneurs, small businesses, or very small businesses under our adopted definitions.

D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements

10. Applicants for MVDDS licenses are required to submit an FCC Form 175 short-form application prior to the auction, and auction winners will be required to file an FCC Form 601 license application. Additionally, we will apply the Part 101 rules governing reporting requirements to MVDDS systems. Specifically, each MVDDS licensee is required to file with the Commission two copies of a report no later than March 1 of each year for the preceding calendar year, which must include the following: (a) name and address of licensee; (b) station(s) call letters and primary geographic service area(s); and (c) 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 forty-eight hours. In addition, we require each MVDDS licensee to file actual data on cases of harmful interference to DBS operations and measures taken to alleviate such interference. We believe that the information compiled in this report will assist us in analyzing trends and competition in the marketplace.

E. Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered

⁶⁶⁰ These definitions have been approved by the U.S. Small Business Administration. See Letter to Margaret W. Weiner, Deputy Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, from Aida Alvarez, Administrator, U.S. Small Business Administration (Sept. 14, 2000).

11. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its approach, which may include the following four alternatives: (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.

12. We have taken significant steps to reduce burdens on small entities wherever possible. To provide opportunities for small entities to participate in any auction that is held, we provide bidding credits for entrepreneurs, small businesses, and very small businesses as defined in Section C of this FRFA. The bidding credits adopted are 15 percent for entrepreneurs, 25 percent for small businesses, and 35 percent for very small businesses. Our decision to adopt CEAs as service areas for MVDDS and to permit the partitioning of these service areas is also intended to provide small entities an opportunity to acquire licenses. There are currently 354 CEAs and we believe that the use of these service areas will encourage smaller business entities to participate in the MVDDS auction. Participation in the MVDDS auction by smaller business entities would foster the buildout of services to local and/or rural areas which are traditionally deemed underserved or unserved. The regulatory burdens we have retained are necessary in order to ensure that the public receives the benefits of innovative new services in a prompt and efficient manner. We will continue to examine alternatives in the future with the objectives of eliminating unnecessary regulations and minimizing any significant economic impact on small entities.

F. Federal Rules that May Duplicate, Overlap, or Conflict With the Final Rules

13. None.

Report to Congress. The Commission will send a copy of the *Second Report and Order*, including this FRFA, in a report to be sent to Congress pursuant to the Congressional Review Act.⁶⁶¹ In addition, the Commission will send a copy of the *Second Report and Order*, including this FRFA, to the Chief Counsel for Advocacy of the Small Business Administration. A copy of the *Second Report and Order* and FRFA (or summaries thereof) will also be published in the Federal Register.⁶⁶²

⁶⁶¹ See 5 U.S.C. § 801(a)(1)(A).

⁶⁶² See 5 U.S.C. § 604(b).