

**APPENDIX A  
PARTIES**

BellSouth Corp. and BellSouth Wireless Cable Inc.  
Catholic Television Network  
Cisco Systems  
Dallas County Community College District, *et. al.*  
Instructional Telecommunications Foundation  
National ITFS Association  
Petitioners (*see supra*)  
Qualcomm  
Region IV Educational Service Center, *et. al.*  
San Francisco/San Jose Educator/Operator Consortium  
Spike Technologies  
C &W Enterprises Inc.  
UT Television

Petitioners:

ADC Telecommunications Corp.  
Aims Community College  
Alamosa Public Schools  
Alda Wireless Holdings, Inc.  
American Communications Services, Inc.  
American Foundation for Instructional TV  
American Telecasting, Inc.  
Aquinas and St. Mary's Catholic Schools  
Augustina College  
Barnesville Public School  
Broadband Networks, Inc.  
Broadcast Cable, Inc.  
Bruning Public School  
C.D.V. Incorporated  
CAI Wireless Systems, Inc.  
California Amplifier  
California Human Development Corporation  
California State University, Stanislaus  
Center for Economic & Social Justice

Central Community College Foundation  
Central Oregon Community College  
CFW Cable, Inc.  
Clarendon Foundation  
Communications & Energy Corp., Inc.  
Community School of Naples  
Comwave

George Mason University  
Instructional  
Foundation, Inc.  
Humanities Instructional Television  
Hybrid Networks, Inc.  
Indiana Higher Education  
Telecommunication System  
Indio Wireless Partnership  
Instructional Media Center,  
California State University,  
Chico  
ITS Corporation  
Ivy Tech State College  
Kessler and Gehman Associates,  
Inc.  
Lance Industries  
Lucas County Educational Service  
Center  
Magellan University

Malcolm Public Schools  
McConnell Communications, Inc.  
Microwave Filter Company, Inc.  
Milwaukee Regional Medical ITS,  
Inc.  
Missouri Baptist College, ITFS  
Montrose School District

Concord Community Schools  
Concordia College  
Conifer Corporation  
Cooperative Educational Services Agency #7  
Cornerstone Christian School System, Inc.  
Cross Country Wireless, Inc.  
CS Wireless Systems, Inc.  
DeLawder Communications, Inc.  
Delta-Montrose Area Vocational Technical Center  
Denver Public Schools  
Digital & Wireless Television  
DiviCom Inc.  
Durand Community Unit School District #322  
EMCEE Broadcast Products  
First Assembly of God, Kahului, Maui, Inc.  
People's Choice TV Corp.  
Pikes Peak Community College  
Polk Community College  
Portland Community College  
Preferred Entertainment, Inc.  
Pueblo Community College  
Pueblo School District 60  
Purdue University  
Raymond Central School  
School District of Oakfield  
South Florida Television, Inc.  
Specchio Developers Ltd.  
Springfield Board of Education  
St. Norbert College  
Stanford Telecommunications, Inc.  
Suncoast Wireless Communications Corporation  
Superchannels of Las Vegas, Inc.  
Tennessee Wireless  
Teton Wireless Television  
The Knowledge Network of Greater Omaha  
University of Colorado at Colorado Springs  
University of Northern Colorado, Academic  
Technology Services  
University of South Dakota  
University of Southern Colorado/KTSC-TV  
University of South Florida  
Valley Lutheran High School  
Views on Learning, Inc.  
Virginia Communications, Inc.  
W.A.T.C.H. TV Company  
Weld County School District RE-1

Multimedia Development  
Corporation  
National Digital Network,  
Inc.  
National Wireless Holdings, Inc.  
Northern Arizona University  
Oklahoma City University  
Oklahoma Educational Television  
Authority  
Omni Microwave  
Oregon Public Broadcasting  
Pacific Monolithics, Inc.  
Pacific Telesis Group  
PCTV Gold, Inc.  
Pecatonica Community School

Winnebago Community Unit District 323  
Wireless Cable Association International, Inc.  
Wireless Cable Digital Alliance  
Wireless Cable of Indianapolis  
Wireless Holdings, Inc. (Videotron USA)  
Wireless One, Inc.  
Wireless One of North Carolina, LLC  
Yellowstone Education Center  
Yuba Community College  
Zenith Digital Media Group

## APPENDIX B

SUPPLEMENTAL FINAL REGULATORY FLEXIBILITY ANALYSIS  
*Report and Order*

As required by the Regulatory Flexibility Act (RFA),<sup>1</sup> a Final Regulatory Flexibility Analysis (FRFA) was incorporated in Appendix B of the *Report and Order*<sup>2</sup> (*R&O*) in this proceeding. The Commission's Supplemental Final Regulatory Flexibility Analysis (Supplemental FRFA) in this *Report and Order on Reconsideration (Reconsideration)* reflects revised or additional information to that contained in the FRFA. This Supplemental FRFA is thus limited to matters raised in response to the *R&O* and that are granted on reconsideration in the *Reconsideration*. The Supplemental FRFA conforms to the RFA, as amended by the Contract With America Advancement Act of 1996.<sup>3</sup>

**I. Need For and Objectives of Action:**

The actions taken in this *Reconsideration* are in response to petitions for reconsideration or clarification of the rules and policies adopted in the *R&O*, in which we amended Parts 21 and 74 of our rules to enhance the ability of Multipoint Distribution Service ("MDS") and Instructional Television Fixed Service ("ITFS") licensees to provide two-way communication services. The petitions have been granted in part and denied in part. The *Reconsideration* grants the petitions that sought to expand the *R&O*'s streamlined application processing system for MDS two-way applications to all ITFS major modification applications. We also grant those petitions that request clarification of the term "documented complaint," which was used in the *R&O* in the discussion of interference complaints. We further grant those petitions for reconsideration that sought a waiver of our advance notification and professional installation rules in regard to very low power response stations and other changes to our advance notification requirement. Finally, we grant those petitions seeking certain minor modifications to our engineering rules adopted in the *R&O* and to certain other minor matters pertaining to ITFS. We believe these final rule amendments will facilitate further two-way transmission and other improvements to the MDS and ITFS services.

**II. Significant Issues Raised by the Public in Response to the Initial Analysis:**

No comments were received specifically in response to the FRFA contained in the *R&O*. However, some commenters did raise arguments concerning the effect that certain of our proposals may have on small entities.

As to whether we should apply the streamlined application processing system, which does not treat applications as mutually exclusive, to ITFS major modification applications, Region IV argued that the existence of mutually exclusive ITFS major modification applications may invoke the auction process,

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<sup>1</sup> 5 U.S.C. § 603.

<sup>2</sup> *Notice of Proposed Rulemaking in the Matter of Amendment of Parts 1, 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions*, 12 FCC Rcd 22174 (1997).

<sup>3</sup> Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA); see generally 5 U.S.C. §§ 601 *et seq.* Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).

which would be unfair to smaller, local educators.<sup>4</sup>

### III. Description and Number of Small Entities Involved:

The RFA generally defines "small entity" as having the same meaning as the terms "small business," "small organization," and "small business concern."<sup>5</sup> In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.<sup>6</sup> 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 SBA.<sup>7</sup>

*MDS:* The Commission has defined "small entity" for the auction of MDS as an entity that, together with its affiliates, has average gross annual revenues that are not more than \$40 million for the preceding three calendar years.<sup>8</sup> This definition of a small entity in the context of MDS auctions has been approved by the SBA.<sup>9</sup> The Commission completed its MDS auction in March 1996 for authorizations in 493 basic trading areas (BTAs). Of 67 winning bidders, 61 qualified as small entities.<sup>10</sup>

MDS is also heavily encumbered with licensees of stations authorized prior to the auction. The SBA has developed a definition of small entities for pay television services, which includes all such companies generating \$11 million or less in annual receipts.<sup>11</sup> This definition includes multipoint distribution systems, and thus applies to MDS licensees and wireless cable operators which did not participate in the MDS auction. Information available to us indicates that there are 832 of these licensees and operators that do not generate revenue in excess of \$11 million annually. Therefore, for purposes of this FRFA, we find there are approximately 892 small MDS providers as defined by the SBA and the Commission's auction rules, and some of these providers may take advantage of our amended rules to provide two-way MDS.

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<sup>4</sup> Petition of Region IV.

<sup>5</sup> 5 U.S.C. § 601(6).

<sup>6</sup> 5 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of small business applies unless an agency after consultation with the Office of Advocacy of the Small Business Administration and after an opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes definitions in the Federal Register.

<sup>7</sup> Small Business Act, 15 U.S.C. § 632.

<sup>8</sup> 47 C.F.R. § 21.961(b)(1).

<sup>9</sup> See *Amendment of Parts 21 and 74 of the Commission's Rules With Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service and Implementation of Section 309(j) of the Communications Act - Competitive Bidding*, MM Docket No. 94-31 and PP Docket No. 93-253, Report and Order, 10 FCC Rcd 9589 (1995).

<sup>10</sup> One of these small entities, O'ahu Wireless Cable, Inc., was subsequently acquired by GTE Media Ventures, Inc., which did not qualify as a small entity for purposes of the MDS auction.

<sup>11</sup> 13 C.F.R. § 121.201.

*ITFS*: There are presently 2032 ITFS licensees. All but 100 of these licenses are held by educational institutions (these 100 fall in the MDS category, above). Educational institutions may be included in the definition of a small entity.<sup>12</sup> ITFS is a non-pay, non-commercial broadcast service that, depending on SBA categorization, has, as small entities, entities generating either \$10.5 million or less, or \$11.0 million or less, in annual receipts.<sup>13</sup> However, we do not collect, nor are we aware of other collections of, annual revenue data for ITFS licensees. Thus, we find that up to 1932 of these educational institutions are small entities that may take advantage of our amended rules to provide two-way ITFS.

#### **IV. Summary of Projected Reporting, Recordkeeping and Other Compliance Requirements:**

The *R&O* adopts the following proposals that include reporting, recordkeeping, and compliance requirements:

We required that response stations can only be initially activated, or reactivated if relocated, by a signal from a booster or primary station, and that hub licensees have a means to remotely deactivate any subscriber's response station transmitter within their RSA. These provisions are intended to give an added measure of control to system licensees useful for conducting interference tests and other system evaluations, and will result in a positive "interlock" feature that prevents inadvertent activation of a newly installed response transmitter when the response antenna is not properly installed so as to receive signals from the associated main or booster transmitters.

We relaxed our notification and professional installation requirements as they pertain to low power response stations. Specifically, neither notice nor professional installation is required for stations operating below 6 dbW EIRP and is only required in other stations operating up to 18 dbW EIRP in certain circumstances. Due to the low power at which these stations operate there is a lessened risk of the kind of harmful RF exposure or of the potential for interference that necessitate the notification and professional installation requirements for stations operating at higher power.

We extended our streamlined application processing system adopted in the *R&O* to major modification applications by ITFS licensees. We will accept applications for ITFS major modifications via a rolling, one-day filing window. Each applicant will have to provide interference protection to all facilities existing or proposed prior to the filing of its application, but its application will take precedence over all subsequently filed applications. Applicants will be required to file their applications with all of their interference analyses, in both hard copy and on disk.

Applicants for two-way facilities will be required to certify that they have met all requirements regarding interference protection to existing and prior proposed facilities. The applicant will also be required to certify that it has served all potentially affected parties with copies of its application and with its engineering analysis supporting its interference compliance claim.

We adopted a more complete definition of the "documented complaint" that will be the basis for the resolution of complaints of unauthorized interference.

#### **V. Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered:**

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<sup>12</sup> See 5 U.S.C. §§ 601 (3)-(5).

<sup>13</sup> See 13 C.F.R. § 121.210 (SIC 4833, 4841, and 4899).

The following steps were taken in the *R&O* to minimize the significant economic impact on small entities:

Extending the streamlined application procession system to ITFS major modifications will provide greater flexibility and reduce the filing burdens on ITFS licensees.

Defining the requirements of a "documented complaint" provides ITFS and other small entities with greater certainty in complaining against unauthorized interference and serves to more completely protect them from such interference.

Relaxing the notification and professional installation requirements in certain circumstances reduces the burden on smaller entities, encourages retail distribution of response stations and still provides protection from harmful interference or harmful exposure to RF emissions.

The following significant alternatives were considered in the *R&O*:

We declined to adopt Catholic Television Network's (CTN) and BellSouth's suggestions for an interference dispute resolution procedure. We found that the proposed procedures would delay dispute resolution and cause longer potential service interruptions.

We did not adopt National ITFS Foundations proposal that we abandon streamlined processing. To do so, would have resulted in using a slow, burdensome processing system that would have jeopardized the future of the industry and the interests of ITFS licensees.

#### **VI. Report to Congress:**

The Commission will send a copy of the *Reconsideration*, including this Supplemental FRFA, in a report to be sent to Congress pursuant to the Small Business Regulatory Enforcement Fairness Act of 1996. *See* 5 U.S.C. § 801(a)(1)(A). In addition, the Commission will send a copy of the *Reconsideration*, including the Supplemental FRFA, to the Chief Counsel for Advocacy of the Small Business Administration. A copy of the *Report and Order* and FRFA (or summaries thereof) will also be published in the Federal Register. *See* 5 U.S.C. § 604(b).

## APPENDIX C

Parts 1, 21, 74 and 101 of Title 47 of the Code of Federal Regulations are amended as follows:

### PART 1 -- PRACTICE AND PROCEDURE

1. The authority for part 1 continues to read as follows:

Authority: 15 U.S.C. 79 et seq.; 47 U.S.C. 151, 154(i), 154(j), 155, 225, and 303(r).

2. In Section 1.1307, paragraph (b)(1), Table 1, right column is amended by adding the entry regarding MDS licensees directly following the existing reference to Multipoint Distribution Service building-mounted antennas, and by adding the entry regarding ITFS licensees directly following the existing reference to part 74, subpart I stations, to read as follows:

§ 1.1307 Actions that may have a significant environmental effect, for which Environmental Assessments (EAs) must be prepared.

\* \* \* \* \*

(b) \* \* \*

(1) \* \* \*

TABLE 1 -- TRANSMITTERS, FACILITIES AND OPERATIONS SUBJECT TO  
ROUTINE ENVIRONMENTAL EVALUATION

Service (title 47 CFR rule part)	Evaluation required if
----------------------------------	------------------------

<p>*****  Multipoint Distribution Service (subpart K of part 21).</p>	<p>*****  *****  *****  MDS licensees are required to attach a label to subscriber transceiver or transverter antennas that:  (1) provides adequate notice regarding potential radiofrequency safety hazards, e.g., information regarding the safe minimum separation distance required between users and transceiver antennas; and  (2) references the applicable FCC-adopted limits for radiofrequency exposure specified in § 1.1310.  *****</p>
<p>*****  Experimental, auxiliary, and special broadcast and other program distributional services (part 74).</p>	<p>*****  *****  *****  ITFS licensees are required to attach a label to subscriber transceiver or transverter antennas that:  (1) provides adequate notice regarding potential radiofrequency safety hazards, e.g., information regarding the safe minimum separation distance required between users and transceiver antennas; and  (2) references the applicable FCC-adopted limits for radiofrequency exposure specified in § 1.1310.  *****  *****</p>

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**PART 21 -- DOMESTIC PUBLIC FIXED RADIO SERVICES**

3. The authority for part 21 continues to read as follows:

Authority: Secs. 1, 2, 4, 201-205, 208, 215, 218, 303, 307, 313, 403, 404, 410, 602, 48 Stat. as amended, 1064, 1066, 1070-1073, 1076, 1077, 1080, 1082, 1083, 1087, 1094, 1098, 1102; 47 U.S.C. 151, 154, 201-205, 208, 215, 218, 303, 307, 313, 314, 403, 404, 602; 47 U.S.C. 552, 554.

4. In Section 21.2, the following definitions, in alphabetical order, are revised to read as follows:

\* \* \* \* \*

Documented Complaint. A complaint that a party is suffering from non-consensual interference. A documented complaint must contain a certification that the complainant has contacted the operator of the allegedly offending facility and tried to resolve the situation prior to filing. The complaint must then specify the nature of the interference, whether the interference is constant or intermittent, when the interference began and the site(s) most likely to be causing the interference. The complaint should be accompanied by a videotape or other evidence showing the effects of the interference. The complaint must contain a motion for a temporary order to have the interfering station cease transmitting. The complaint must be filed with the Secretary's office and served on the allegedly offending party.

\* \* \* \* \*

Multipoint Distribution Service response station. A fixed station operated by an MDS licensee, the lessee of MDS channel capacity or a subscriber of either to communicate with a response station hub or associated MDS station. A response station under this part may share facilities with other MDS response stations and/or one or more Instructional Television Fixed Service (ITFS) response stations authorized pursuant to § 74.939 of this chapter or § 74.940 of this chapter.

\* \* \* \* \*

5. In Section 21.11, paragraphs (f) and (g) are redesignated as paragraphs (e) and (f), respectively, and the section heading, paragraph (d), and newly redesignated paragraph (e) are revised, to read as follows:

§ 21.11 Miscellaneous forms.

\* \* \* \* \*

(d) Assignment of license. FCC Form 305 ("Application for Consent to Assignment of Radio Station Construction Authorization or License (for Stations in Services Other than Broadcast)") must be submitted to assign voluntarily (as by, for example, contract or other agreement) or involuntarily (as by, for example, death, bankruptcy, or legal disability) the station license or conditional license. In the case of involuntary assignment, the application must be filed within 30 days of the event causing the assignment. FCC Form 305 also must be used for nonsubstantial (pro forma) assignments. In addition, FCC Form 430 must be submitted by the proposed assignee unless such assignee has a current and substantially accurate report on file with the Commission. Whenever a group of station licenses or conditional licenses in the same radio service is to be assigned to a single assignee, a single "blanket" application may be filed to cover

the entire group, if the application identifies each station by call sign and station location and if two copies are provided for each station affected. The assignment must be completed within 45 days from the date of authorization. Upon consummation of an approved assignment, the Commission must be notified by letter of the date of consummation within 10 days of its occurrence.

(e) Transfer of control of corporation holding a conditional license or license. FCC Form 306 ("Application for Consent to Transfer of Control") must be submitted in order to voluntarily or involuntarily transfer control (de jure or de facto) of a corporation holding any conditional licenses or licenses. In the case of involuntary transfer of control, the application must be filed within 30 days of the event causing the transfer of control. FCC Form 306 also must be used for nonsubstantial (pro forma) transfers of control. In addition, FCC Form 430 must be submitted by the proposed transferee unless such transferee has a current and substantially accurate report on file with the Commission. Whenever control of a corporation holding a group of station licenses or conditional licenses in the same radio service is to be transferred to a single transferee, a single "blanket" application may be filed to cover the entire transfer, if the application identifies each station by call sign and station location and if two copies are provided for each station affected. The transfer must be completed within 45 days from the date of authorization. Upon consummation of an approved transfer, the Commission must be notified by letter of the date of consummation within 10 days of its occurrence.

\* \* \* \* \*

6. In Section 21.23, paragraphs (c)(1)(vi) and (c)(2) are revised to read as follows:

\* \* \* \* \*

(c) \* \* \*

(1) \* \* \*

\* \* \* \* \*

(vi) Any technical change which would increase the effective radiated power in any horizontal or vertical direction by more than one and one-half (1.5) dB; or

\* \* \* \* \*

(2) Except during the sixty (60) day amendment period provided for in § 21.27(d), any amendment to an application for a new or modified response station hub, booster station or point-to-multipoint I channel(s) station or to an application for a modified main station that reflects any change in the technical specifications of the proposed facility, includes any new or modified analysis of potential interference to another facility or submits any interference consent from a neighboring licensee. Such an amendment shall result in the application being

assigned a new file number and being treated as newly filed.

\* \* \* \* \*

7. In Section 21.27, paragraph (d) is added, to read as follows:

§ 21.27 Public notice period.

\* \* \* \* \*

(d) Notwithstanding any other provisions of this part, effective as of September 17, 1998, there shall be a one-week window, at such time as the Commission shall announce by public notice, for the filing of applications for high-power signal booster station, response station hub and I channel(s) point-to-multipoint transmission licenses, during which all applications shall be deemed to have been filed as of the same day for purposes of §§ 21.909, 21.913 and 74.939(l) of this chapter. Following the publication of a public notice announcing the tendering for filing of applications submitted during that window, applicants shall have a period of sixty (60) days to amend their applications, provided such amendments do not result in any increase in interference to any previously-proposed or authorized station, or to facilities proposed during the window, absent consent of the applicant for or conditional licensee or licensee of the station that would receive such interference. At the conclusion of that sixty (60) day period, the Commission shall publish a public notice announcing the acceptance for filing of all applications submitted during the initial window, as amended during the sixty (60) day period. All petitions to deny such applications must be filed within sixty (60) days of such second public notice. On the sixty-first (61st) day after the publication of such second public notice, applications for new or modified response station hub, booster station and I channel(s) point-to-multipoint transmission licenses may be filed and will be processed in accordance with the provisions of §§ 21.909, 21.913 and 74.939(l) of this chapter. Notwithstanding § 21.31, each application submitted during the initial window shall be granted on the sixty-first (61st) day after the Commission shall have given such public notice of its acceptance for filing, unless prior to such date either a party in interest timely files a formal petition to deny or for other relief pursuant to § 21.30(a), or the Commission notifies the applicant that its application will not be granted. Where an application is granted pursuant to the provisions of this paragraph, the conditional licensee or licensee shall maintain a copy of the application at the transmitter site or response station hub until such time as the Commission issues a license.

8. In Section 21.31, paragraph (a) is revised to read as follows and paragraph (e)(6)(iv) is deleted in its entirety and paragraph (a) is revised to read as follows:.

(a) Except with respect to applications for new or modified response stations hubs, booster stations, and point-to-multipoint I channel stations, and to applications for modified main stations, filed on the same day or during the same window, the Commission will consider applications to be mutually exclusive if their conflicts are such that grant of one application would effectively preclude by reason of harmful electrical interference, or other practical reason,

the grant of one or more of the other applications.

9. In Section 21.42, paragraph (b)(3) is revised, and paragraph (c)(8) is added, to read as follows:

§ 21.42 Certain modifications not requiring prior authorization.

\* \* \* \* \*

(b) \* \* \*

(3) The Commission is notified of changes made to facilities by the submission of a completed FCC Form 304 within thirty (30) days after the changes are made.

\* \* \* \* \*

(c) \* \* \*

(8) A change to a sectorized antenna system comprising an array of directional antennas, provided that such system does not change polarization or result in an increase in radiated power by more than one dB in any horizontal or vertical direction; provided, however, that notice of such change is provided to the Commission on FCC Form 331 and to the Commission's copy contractor within ten (10) days of installation.

\* \* \* \* \*

10. In Section 21.101 paragraph (a) Note 2 is amended to read as follows:

<sup>2</sup>Beginning [60 days following publication in the Federal Register] the equipment authorized to be used at all MDS main stations, and at all MDS booster stations authorized pursuant to §21.913(b), shall maintain a frequency tolerance of 0.001%. MDS booster stations authorized pursuant to §21.913(e) and MDS response stations authorized pursuant to §21.909 shall employ transmitters with sufficient frequency stability to ensure that the emission is, at all times, within the required emission mask.

11. Section 21.201 is revised to read as follows:

§ 21.201 Posting of station license.

(a) The instrument of authorization, a clearly legible photocopy thereof, or the name, address and telephone number of the custodian of the instrument of authorization shall be available at each station, booster station authorized pursuant to § 21.913(b) and MDS response station hub. Each operator of an MDS booster station shall post at the booster station the name, address and telephone number of the custodian of the notification filed pursuant to § 21.913(e)

if such notification is not maintained at the booster station.

(b) If an MDS station, an MDS booster station or an MDS response station hub is operated unattended, the call sign and name of the licensee shall be displayed such that it may be read within the vicinity of the transmitter enclosure or antenna structure.

12. In Section 21.900, the final paragraph is revised as follows:

§ 21.900 Eligibility

\* \* \* \* \*

The applicant shall state whether service will be provided initially on a common carrier basis or on a non-common carrier basis. An applicant proposing to provide initially common carrier service shall state whether there is any affiliation or relationship to any intended or likely subscriber or program originator.

13. In Section 21.901, paragraphs (b), and (d) are revised to read as follows:

§ 21.901 Frequencies.

\* \* \* \* \*

(b) \* \* \*

(4) At 2596-2602 MHz, 2608-2614 MHz, 2620-2626 MHz, and 2632-2638 MHz (designated as Channels E1, E2, E3 and E4, respectively, with the four channels to be designated the E-group channels), and Channels I5 and I13 listed in § 74.939(j) of this chapter,<sup>1</sup> or

(5) At 2602-2608 MHz, 2614-2620 MHz, 2626-2632 MHz and 2638-2644 MHz (designated as Channels F1, F2, F3 and F4, respectively, with the four channels to be designated the F-group channels), and Channels I6 and I14, listed in § 74.939(j) of this chapter,<sup>1</sup> or

\* \* \*

\* \* \* \* \*

(d) An MDS licensee or conditional licensee may apply to exchange evenly one or more of its assigned channels with another MDS licensee or conditional licensee in the same system, or with an ITFS licensee or conditional licensee in the same system. The licensees or conditional licensees seeking to exchange channels shall file in tandem with the Commission separate pro forma assignment of license applications, each attaching an exhibit which clearly specifies that the application is filed pursuant to a channel exchange agreement. The exchanged channel(s) shall be regulated according to the requirements applicable to the assignee.

\* \* \* \* \*

14. In Section 21.902, the section heading, paragraphs (b)(3), (b)(4), (b)(5), (b)(7), (f)(1), (f)(2), (i)(1), (i)(2), (i)(4) and (i)(6) are revised to read as follows:

§ 21.902 Interference.

\* \* \* \* \*

(b) \* \* \*

(3) Engineer the system to provide at least 45 dB of cochannel interference protection within the 56.33 km (35 mile) protected service area of any authorized or previously-proposed ITFS or incumbent MDS station, and at each previously-registered ITFS receive site registered as of September 17, 1998 (or the appropriate value for bandwidths other than 6 MHz. See below.)

(4) Engineer the station to provide at least 0 dB of adjacent channel interference protection within the 56.33 km (35 mile) protected service area of any authorized or previously-proposed ITFS or incumbent MDS station, and at each previously-registered ITFS receive site registered as of September 17, 1998 (or the appropriate value for bandwidths other than 6 MHz. See below.)

(5) (i) Engineer the station to limit the calculated free space power flux density to  $-73 \text{ dBW/m}^2$  (or the appropriate value for bandwidth other than 6 MHz, see below) at the boundary of a 56.33 km (35 mile) protected service area, where there is an unobstructed signal path from the transmitting antenna to the boundary; or alternatively, obtain the written consent of the entity authorized for the adjoining area to exceed the  $-73 \text{ dBW/m}^2$  limiting signal strength at the common boundary.

\* \* \*

(7) Notwithstanding the above, main, booster and response stations shall use the following formulas, as applicable, for determining compliance with: (1) Radiated field contour limits where bandwidths other than 6 MHz are employed at stations utilizing digital modulation with uniform power spectral density; and (2) Cochannel and adjacent channel D/U ratios where the bandwidths in use at the interfering and protected stations are unequal and both stations are utilizing digital modulation with uniform power spectral density or one station is utilizing such modulation and the other station is utilizing either 6 MHz NTSC analog modulation or 125 kHz analog modulation (I channels only).

(i) Contour limit:  $-73 \text{ dBW/m}^2 + 10 \log(X/6) \text{ dBW/m}^2$ , where X is the bandwidth in MHz of the digital channel.

(ii) Co-channel D/U:  $45 \text{ dB} + 10 \log(X_1/X_2) \text{ dB}$ , where  $X_1$  is the bandwidth in MHz of the protected channel and  $X_2$  is the bandwidth in MHz of the interfering channel.

(iii) Adjacent channel D/U:  $0 \text{ dB} + 10 \log(X_1/X_2) \text{ dB}$ , where  $X_1$  is the bandwidth in MHz of the protected channel and  $X_2$  is the bandwidth in MHz of the interfering channel.

\* \* \* \* \*

(f) \* \* \*

(1) Cochannel interference is defined as the ratio of the desired signal to the undesired signal present in the desired channel, at the output of a reference receiving antenna oriented to receive the maximum desired signal. Harmful interference will be considered present when a calculation using a terrain sensitive signal propagation model determines that this ratio is less than 45 dB (or the appropriate value for bandwidths other than 6 MHz. See above.)

(2) Adjacent channel interference is defined as the ratio of the desired signal to undesired signal present in an adjacent channel, at the output of a reference receiving antenna oriented to receive the maximum desired signal level.

(i) Harmful interference will be considered present when a calculation using a terrain sensitive model determines that this ratio is less than 0dB (or the appropriate value for bandwidths other than 6 MHz. See above.)

(ii) In the alternative, harmful interference will be considered present for an ITFS station constructed before May 26, 1983, when a calculation using a terrain-sensitive propagation model determines that this ratio is less than 10 dB (or the appropriate value for bandwidths other than 6 MHz, see above.) unless:

(A) The individual receive site under consideration has been subsequently upgraded with up-to-date reception equipment, in which case the ratio shall be less than 0 dB. Absent information presented to the contrary, however, the Commission will assume that reception equipment installation occurred simultaneously with original station equipment; or

(B) The license for an MDS station is conditioned on the proffer to the affected ITFS station licensee of equipment capable of providing a ratio of 0 dB or more at no expense to the ITFS station licensee, and also conditioned, if necessary, on the proffer of installation of such equipment; and there has been no showing by the affected ITFS station licensee demonstrating good cause and demonstrating that the proposed equipment will not provide a ratio of 0 dB or more, or that installation of such equipment, at no expense to the ITFS station licensee, is not possible or has not been proffered.

\* \* \* \* \*

(i) (1) For each application for a new station, or amendment thereto, proposing MDS facilities, filed on October 1, 1995, or thereafter, on or before the day the application or amendment is filed, the applicant must prepare, but is not required to submit with its application or amendment, an analysis demonstrating that operation of the MDS applicant's transmitter will not cause harmful electrical interference to each receive site registered as of September 17, 1998, nor within a protected service area as defined at paragraph (d)(1) of this section, of any cochannel or adjacent channel ITFS station licensed, with a conditional license, or proposed in a pending application on the day such MDS application is filed, with an ITFS transmitter site within 50 miles of the coordinates of the MDS station's proposed transmitter site.

(2) For each application described in paragraph (i)(1) of this section, the applicant must serve, by certified mail, return receipt requested, on or before the day the application or amendment described in paragraph (i)(1) of this section is filed initially with the Commission, a copy of the complete MDS application or amendment, including each exhibit and interference study, described in paragraph (i)(1) of this section, on each ITFS licensee, conditional licensee, or applicant described in paragraph (i)(1) of this section.

\* \* \* \* \*

(4) For each application described in paragraph (i)(1) of this section, the applicant must file with the Commission in Washington, DC, on or before the 30th day after the application or amendment described in paragraph (i)(1) of this section is filed initially with the Commission, a written notice which contains the following:

\* \* \*

(iii) A list of each ITFS licensee and conditional licensee described in paragraph (i)(1) of this section;

(iv) The address used for service to each ITFS licensee and conditional licensee described in paragraph (i)(1) of this section; and

(v) A list of the date each ITFS licensee and conditional licensee described in paragraph (i)(1) of this section received a copy of the complete application or amendment described in paragraph (i)(1) of this section; or a notation of lack of receipt by the ITFS licensee or conditional licensee of a copy of the complete application or amendment, on or before such 30th day, together with a description of the applicant's efforts for receipt by each such licensee or conditional licensee lacking receipt of the application.

\* \* \* \* \*

(6) (i) Notwithstanding the provisions of Sections 1.824(c) and 21.30(a)(4), for

each application described in paragraph (i)(1) of this section, each ITFS licensee and each ITFS conditional licensee described in paragraph (i)(1) of this section may file with the Commission, on or before the 30th day after the public notice described in paragraph (i)(5) of this section, a petition to deny the MDS application.

\* \* \* \* \*

(iii) \* \* \*

\* \* \* \* \*

(E) include a demonstration, in those cases in which the MDS applicant's analysis is dependent upon modification(s) to the ITFS facility, that the harmful interference cannot be avoided by the proposed substitution of new or modified equipment to be supplied and installed by the MDS applicant, at no expense to the ITFS licensee or conditional licensee; and

(F) be limited to raising objections concerning the potential for harmful interference to its ITFS station, or concerning a failure by the MDS applicant to serve the ITFS licensee or conditional licensee with a copy of the complete application or amendment described in paragraph (i)(1) of this section.

(iv) The Commission will presume an ITFS licensee or conditional licensee described in paragraph (i)(1) of this section has no objection to operation of the MDS station, if the ITFS licensee or conditional licensee fails to file a petition to deny by the deadline prescribed in paragraph (i)(6)(i) of this section.

\* \* \* \* \*

15. In Section 21.903, paragraph (d) is revised to read as follows:

\* \* \* \* \*

(d) An MDS licensee also may alternate, without further authorization required, between rendering service on a common carrier and non-common carrier basis, provided that the licensee notifies the Commission of any service status changes at least 30 days in advance of such changes. The notification shall state whether there is any affiliation or relationship to any intended or likely subscriber or program originator.

16. Section 21.904, including its section heading, is revised to read as follows:

§ 21.904 Point-to-multipoint EIRP limitations.

(a) The maximum EIRP of a main or booster station shall not exceed 33 dBW + log<sub>10</sub>(X/6) dBW, where X is the actual bandwidth if other than 6 MHz, except as provided in paragraph (b) of this section.

(b) If a main or booster station sectorizes or otherwise uses one or more transmitting antennas with a non-omnidirectional horizontal plane radiation pattern, the maximum EIRP in a given direction shall be determined by the following formula:

$$\text{EIRP} = 33 \text{ dBW} + 10 \log(X/6) \text{ dBW} + 10 \log(360/\text{beamwidth}) \text{ dBW},$$
 where X is the channel width in MHz and  $10 \log(360/\text{beamwidth}) \leq 6 \text{ dB}$ .

Beamwidth is the total horizontal plane beamwidth of the individual transmitting antenna for the station or any sector measured at the half-power points. The first term of the equation above, 33 dBW, must be adjusted appropriately based upon the ratio of 6 MHz to the subchannel or superchannel, or 125 kHz, bandwidth.

(c) An increase in station EIRP, above currently-authorized or previously-proposed values, to the maximum values provided in paragraphs (a) and (b) of this section may be authorized, if the requested increase would not cause harmful interference to any authorized or previously-proposed, cochannel or adjacent channel station entitled to interference protection under the Commission's rules, or if an applicant demonstrates that:

(1) A station that must be protected from interference could compensate for interference by increasing its EIRP; and

(2) The interfered-with station may increase its own EIRP consistent with the rules and without causing harmful interference to any cochannel or adjacent channel main or booster station protected service area, response station hub or BTA/PSA, for which consent for the increased interference has not been obtained; and

(3) The applicant requesting authorization of an EIRP increase agrees to pay all expenses associated with the increase in EIRP by the interfered-with station.

(d) For television transmission if the authorized bandwidth is 4.0 MHz or more for the visual and accompanying aural signal, the peak power of the accompanying aural signal must not exceed 10 percent of the peak visual power of the transmitter. The Commission may order a reduction in aural signal power to diminish the potential for harmful interference.

(e) For main, booster and response stations utilizing digital emissions with non-uniform power spectral density (*e.g.* QPSK), the power measured within any 100 kHz resolution bandwidth within the 6 MHz channel occupied by the non-uniform emission cannot exceed the power permitted within any 100 kHz resolution bandwidth within the 6 MHz channel if it were occupied by an emission with uniform power spectral density, *e.g.*, if the maximum permissible power of a station utilizing a perfectly uniform power spectral density across a 6 MHz channel

were 2000 watts EIRP, this would result in a maximum permissible power flux density for the station of  $2000/60 = 33.3$  watts EIRP per 100 kHz bandwidth. If a non-uniform emission were substituted at the station, station power would still be limited to a maximum of 33.3 watts EIRP within any 100 kHz segment of the 6 MHz channel, irrespective of the fact that this would result in a total 6 MHz channel power of less than 2000 watts EIRP.

17. In Section 21.905, paragraphs (b) and (d) are revised to read as follows:

§ 21.905 Emissions and bandwidth.

\* \* \* \* \*

(b) Quadrature amplitude modulation (QAM), digital vestigial sideband modulation (VSB), quadrature phase shift key modulation (QPSK), code division multiple access (CDMA), and orthogonal frequency division multiplex (OFDM)-emissions may be employed, subject to compliance with the policies set forth in the *Declaratory Ruling and Order*, 11 FCC Rcd 18839 (1996). Use of OFDM also is subject to the subsequent *Declaratory Ruling and Order*, DA 99-554 (Mass Med. Bur. rel. Mar. 19, 1999). Other digital emissions may be added to those authorized above, including emissions with non-uniform power spectral density, if the applicant provides information in accordance with the guidelines and procedures set forth in the *Declaratory Ruling and Order* which clearly demonstrates the spectral occupancy and interference characteristics of the emission. The licensee may subchannelize its authorized bandwidth, provided that digital modulation is employed and the aggregate power does not exceed the authorized power for the channel, and may utilize all or a portion of its authorized bandwidth for MDS response stations authorized pursuant to § 21.909. The licensee may also, jointly with affected adjacent channel licensees, transmit utilizing bandwidth in excess of its authorized frequencies, provided that digital modulation is employed, all power spectral density requirements set forth in this part are met and the out-of-band emissions restrictions set forth in § 21.908 are met at and beyond the edges of the channels employed. The wider channels thus created may be redivided to create narrower channels.

\* \* \* \* \*

(d) Notwithstanding the above, any digital emission which complies with the out-of-band emission restrictions of § 21.908 may be used in the following circumstances:

(1) At any MDS main or booster station transmitter which is located more than 160.94 km (100 miles) from the nearest boundary of all cochannel and adjacent channel ITFS and MDS protected service areas, including Basic Trading Areas and Partitioned Service Areas; and

(2) At all MDS response station transmitters within a response service area if all points along the response service area boundary line are more than 160.94 km (100 miles) from the nearest boundary of all cochannel and adjacent channel ITFS and MDS protected service

areas, including Basic Trading Areas and Partitioned Service Areas; and

(3) At any MDS transmitter where all parties entitled by this part to interference protection from that transmitter have mutually consented to the use at that transmitter of such emissions:

18. In Section 21.906, paragraphs (a) and (d) are revised to read as follows:

§21.906 Antennas.

(a) Main and booster station transmitting antennas shall be omnidirectional, except that a directional antenna with a main beam sufficiently broad to provide adequate service may be used either to avoid possible interference with other users in the frequency band, or to provide coverage more consistent with distribution of potential receiving points. In lieu of an omnidirectional antenna, a station may employ an array of directional antennas in order to reuse spectrum efficiently. When an applicant proposes to employ a directional antenna, or a licensee notifies the Commission pursuant to §21.42 of the installation of a sectorized antenna system, the applicant shall provide the Commission with information regarding the orientation of the directional antenna(s), expressed in degree of azimuth, with respect to true north, and the make and model of such antenna(s).

\* \* \* \* \*

(d) Directive receiving antennas shall be used at all points other than response station hubs and shall be elevated no higher than necessary to assure adequate service. Receiving antenna height shall not exceed the height criteria of part 17 of this chapter, unless authorization for use of a specific maximum antenna height (above ground and above mean sea level) for each location has been obtained from the Commission prior to the erection of the antenna. (See part 17 of this chapter concerning the construction, marking and lighting of antenna structures.)

19. Section 21.909 is revised to read as follows:

§ 21.909 MDS response stations.

(a) An MDS response station is authorized to provide communication by voice, video and/or data signals with its associated MDS response station hub or MDS station. An MDS response station may be operated only by the licensee of an MDS station, by any lessee of the MDS station or response station hub, or by a subscriber of either. The authorized channel may be divided to provide distinct subchannels for each of more than one response station, provided that digital modulation is employed and the aggregate power does not exceed the authorized power for the channel. An MDS response station may also, jointly with other licensees, transmit utilizing bandwidth in excess of that authorized to the station, provided that digital modulation is employed, all power spectral density requirements set forth in this part are met, and the out-of-band emissions restrictions set forth in § 21.908(b) or paragraph (j) of this section are

complied with. When a 125 kHz channel is employed, the specific channel which may be used by the response station is determined in accordance with §§ 21.901 and 74.939(j) of this chapter.

(b) MDS response stations that utilize the 2150-2162 MHz band, the 2500-2686 MHz band, and/or the 125 kHz channels may be installed and operated without an individual license, to communicate with a response station hub authorized under a response station hub license, provided that the conditions set forth in paragraph (g) of this section are complied with and that MDS response stations operating in this manner employ only digital modulation with uniform power spectral density in accordance with the Commission's Declaratory Ruling and Order, 11 FCC Rcd 18839 (1996).

(c) An applicant for a response station hub license, or for modification thereto where not subject to § 21.41 or § 21.42, shall:

(1) File FCC Form 331 with Mellon Bank, and certify on that form that it has complied with the requirements of paragraphs (c)(2) and (d) of this section and that the interference data submitted under paragraph (d) of this section is complete and accurate. Failure to certify compliance and to comply completely with the requirements of paragraphs (c)(2) and (d) of this section shall result in dismissal of the application or revocation of the response station hub license, and may result in imposition of a monetary forfeiture; and

(2) Submit to the Commission's copy contractor, both in hard copy and on a 3.5" DSHD computer diskette in ASCII, the following:

(i) Duplicates of the Form 331 filed with Mellon Bank; and

(ii) The data required by Appendix D to the Report and Order on Reconsideration in MM Docket No. 97-217, FCC 99-178, "Methods for Predicting Interference from Response Station Transmitters and to Response Station Hubs and for Supplying Data on Response Station Systems"; and

(iii) The information, showings and certifications required by paragraph (d) of this section; and

(3) Submit to the Commission, only upon Commission staff request, duplicates of the submissions required by paragraph (c)(2) of this section.

(d) An applicant for a response station hub license shall, pursuant to paragraph (c)(2)(iii) of this section, submit to the Commission's copy contractor the following:

(1) The geographic coordinates, street address, and the height of the center line of the reception antenna(s) above mean sea level for the proposed response station hub; and

(2) A specification of:

(i) the response service area in which the applicant or its lessee proposes to install MDS response stations to communicate with the response station hub, any regions into which the response service area will be subdivided for purposes of interference analysis, and any regional classes of response station characteristics which will be used to define the operating parameters of groups of response stations within each region for purposes of interference analysis, including:

(A) the maximum height above ground level of the transmission antenna that will be employed by any response station in the regional class and that will be used in interference analyses; and

(B) the maximum equivalent isotropic radiated power (EIRP) that will be employed by any response station in the regional class and that will be used in interference analyses; and

(C) any sectorization that will be employed, including the polarization to be employed by response stations in each sector and the geographic orientation of the sector boundaries, and that will be used in interference analyses; and

(D) the combined worst-case outer envelope plot of the patterns of all models of response station transmission antennas that will be employed by any response station in the regional class to be used in interference analyses; and

(E) the maximum number of response stations that will be operated simultaneously in each region using the characteristics of each regional class applicable to each region.

(ii) the channel plan (including any guardbands at the edges of the channel) to be used by MDS response stations in communicating with each response station hub, including a statement as to whether the applicant will employ the same frequencies on which response stations will transmit to also transmit on a point-to-multipoint basis from an MDS station or MDS booster station; and

(3) A demonstration that:

(i) The proposed response station hub is within a protected service area, as defined in § 21.902(d) or § 21.933, to which the applicant is entitled either:

(A) by virtue of its being the licensee of an incumbent MDS station whose channels are being converted for MDS response station use; or

(B) by virtue of its holding a Basic Trading Area or Partitioned Service Area authorization. In the case of an application for response stations to utilize one or more of the 125 kHz response channels, such demonstration shall establish that the response

station hub is within the protected service area of the station authorized to utilize the associated E-Group or F-Group channel(s); and

(ii) The entire proposed response service area is within a protected service area to which the applicant is entitled either (A) by virtue of its being the licensee of an incumbent MDS station whose channels are being converted for MDS response station use; or (B) by virtue of its holding a Basic Trading Area or Partitioned Service Area authorization. In the alternative, the applicant may demonstrate that the licensee entitled to any cochannel protected service area which is overlapped by the proposed response service area has consented to such overlap. In the case of an application for response stations to utilize one or more of the 125 kHz response channels, such demonstration shall establish that the response service area is entirely within the protected service area of the station authorized to utilize the associated E-Group or F-Group channel(s), or, in the alternative, that the licensee entitled to any cochannel protected service area which is overlapped by the proposed response service area has consented to such overlap; and

(iii) The combined signals of all simultaneously operating MDS response stations within all response service areas and oriented to transmit towards their respective response station hubs, and all cochannel MDS stations and booster stations licensed to or applied for by the applicant will not generate a power flux density in excess of  $-73$  dBW/m<sup>2</sup> (or the appropriately adjusted value based on the actual bandwidth used if other than 6 MHz, see § 21.902(b)(7)(i)) outside the boundaries of the applicant's protected service area, as measured at locations for which there is an unobstructed signal path, except to the extent that consent of affected licensees has been obtained or consents have been granted pursuant to paragraph (d)(3)(ii) of this section to an extension of the response service area beyond the boundaries of the protected service area; and

(iv) The combined signals of all simultaneously operating MDS response stations within all response service areas and oriented to transmit towards their respective response station hubs, and all cochannel MDS stations and booster stations licensed to or applied for by the applicant, will result in a desired to undesired signal ratio of at least 45 dB (or the appropriately adjusted value based on the actual bandwidth used if other than 6 MHz, see § 21.902(b)(7)(ii)):

(A) within the protected service area of any authorized or previously-proposed cochannel MDS or ITFS station with a 56.33 km (35 mile) protected service area with center coordinates located within 160.94 km (100 miles) of the proposed response station hub; and

(B) within the booster service area of any cochannel booster station entitled to such protection pursuant to §§ 21.913(f) or 74.985(f) of this chapter and located within 160.94 km (100 miles) of the proposed response station hub; and

(C) at any registered receive site of any authorized or previously-

proposed cochannel ITFS station or booster station located within 160.94 km (100 miles) of the proposed response station hub, or, in the alternative, that the licensee of or applicant for such cochannel station or hub consents to the application; and

(v) The combined signals of all simultaneously operating MDS response stations within all response service areas and oriented to transmit towards their respective response station hubs, and all cochannel MDS stations and booster stations licensed to or applied for by the applicant, will result in a desired to undesired signal ratio of at least 0 dB (or the appropriately adjusted value based on the actual bandwidth used if other than 6 MHz, see § 21.902(b)(7)(iii)):

(A) within the protected service area of any authorized or previously-proposed adjacent channel MDS or ITFS station with a 56.33 km (35 mile) protected service area with center coordinates located within 160.94 km (100 miles) of the proposed response station hub; and

(B) within the booster service area of any adjacent channel booster station entitled to such protection pursuant to §§ 21.913(f) or 74.985(f) of this chapter and located within 160.94 km (100 miles) of the proposed response station hub; and

(C) at any registered receive site of any authorized or previously-proposed adjacent channel ITFS station or booster station located within 160.94 km (100 miles) of the proposed response station hub, or, in the alternative, that the licensee of or applicant for such adjacent channel station or hub consents to the application; and

(vi) The combined signals of all simultaneously operating MDS response stations within all response service areas and oriented to transmit towards their respective response station hub and all cochannel MDS stations and booster stations licensed to or applied for by the applicant will comply with the requirements of paragraph (i) of this section and § 74.939(i) of this chapter.

(4) A certification that the application has been served upon

(i) the holder of any cochannel or adjacent channel authorization with a protected service area which is overlapped by the proposed response service area;

(ii) the holder of any cochannel or adjacent channel authorization with a protected service area that adjoins the applicant's protected service area;

(iii) the holder of a cochannel or adjacent channel authorization for any BTA or PSA inside whose boundaries are locations for which there is an unobstructed signal path for combined signals from within the response station hub applicant's protected service area; and

(iv) every licensee of, or applicant for, any cochannel or adjacent channel,

authorized or previously-proposed, incumbent MDS station with a 56.33 km (35 mile) protected service area with center coordinates located within 160.94 km (100 miles) of the proposed response station hub;

(v) every licensee of, or applicant for, any cochannel or adjacent channel, authorized or previously-proposed ITFS station (including any booster station or response station hub) located within 160.94 km (100 miles) of the proposed response station hub; and

(vi) every licensee of any non-cochannel or non-adjacent channel ITFS station (including any booster station) with one or more registered receive sites in, or within 1960 feet of the proposed response station service area.

(e) Except as set forth in § 21.27(d), applications for response station hub licenses may be filed at any time. Notwithstanding any other provision of part 21 (including §21.31), applications for response station hub licenses meeting the requirements of paragraph (c) of this section shall cut-off applications that are filed on a subsequent day for facilities that would cause harmful electromagnetic interference to the proposed response station hubs. A response station hub shall not be entitled to protection from interference caused by facilities proposed on or prior to the day the application for the response station hub license is filed. Response stations shall not be required to protect from interference facilities proposed on or after the day the application for the response station hub license is filed.

(f) Notwithstanding the provisions of § 21.30(b)(4) and except as set forth in § 21.27(d), any petition to deny an application for a response station hub license shall be filed no later than the sixtieth (60th) day after the date of public notice announcing the filing of such application or major amendment thereto. Notwithstanding § 21.31 and except as provided in § 21.27(d), an application for a response station hub license that meets the requirements of this section shall be granted on the sixty-first (61st) day after the Commission shall have given public notice of the acceptance for filing of it, or of a major amendment to it if such major amendment has been filed, unless prior to such date either a party in interest timely files a formal petition to deny or for other relief pursuant to § 21.30(a), or the Commission notifies the applicant that its application will not be granted. Where an application is granted pursuant to the provisions of this paragraph, the conditional licensee or licensee shall maintain a copy of the application at the response station hub until such time as the Commission issues a response station hub license.

(g) An MDS response station hub license shall be conditioned upon compliance with the following:

(1) No MDS response station shall be located beyond the response service area of the response station hub with which it communicates; and

(2) No MDS response station shall operate with a transmitter output power in excess of 2 watts; and

(3) No response station shall operate with an EIRP in excess of that specified in the application for the response station hub pursuant to paragraph (d)(2)(i)(B) of this section for the particular regional class of characteristics with which the response station is associated, and such response station shall not operate at an excess of  $33 \text{ dBW} + 10 \log(X/6) \text{ dBW}$ , where X is the channel width in MHz; and

(4) Each MDS response station shall employ a transmission antenna oriented towards the response station hub with which the MDS response station communicates, and such antenna shall be no less directional than the worst case outer envelope pattern specified in the application for the response station hub pursuant to paragraph (d)(2)(i)(D) of this section for the regional class of characteristics with which the response station is associated; and

(5) The combined out-of-band emissions of all response stations using all or part of one or multiple contiguous 6 MHz channels and employing digital modulation shall comply with § 21.908(d). The combined out-of-band emissions of all response stations using all or part of one or multiple contiguous 125 kHz channels shall comply with paragraph (j) of this section. However, should harmful interference occur as a result of emissions outside the assigned channel, additional attenuation may be required; and

(6) The response stations transmitting simultaneously at any time within any given region of the response service area utilized for purposes of analyzing the potential for interference by response stations shall conform to the numerical limits for each class of response station proposed in the application for the response station hub license. Notwithstanding the foregoing, the licensee of a response station hub license may alter the number of response stations of any class operated simultaneously in a given region, without prior Commission authorization, provided that the licensee:

(i) First notifies the Commission of the altered number of response stations of such class(es) to be operated simultaneously in such region, and certifies in that notification that it has complied with the requirements of paragraphs (g)(6)(ii) and (iii) of this section, and that the interference data submitted under paragraph (g)(6)(ii) is complete and accurate; and

(ii) Provides the Commission's copy contractor with a copy of such notification and with an analysis establishing that such alteration will not result in any increase in interference to the protected service area or protected receive sites of any existing or previously-proposed, cochannel or adjacent channel MDS or ITFS station or booster station, to the protected service area of any MDS Basic Trading Area or Partitioned Service Area licensee entitled to protection pursuant to paragraph (d)(3) of this section, or to any existing or previously-proposed, cochannel or adjacent channel response station hub, or response station under § 21.949 or § 74.949 of this chapter; or that the applicant for or licensee of such facility has consented to such interference; and

(iii) Serves a copy of such notification and analysis upon each party entitled to be served pursuant to paragraph (d)(4) of this section; and

(iv) Submits to the Commission, only upon Commission staff request, duplicates of the submissions required by paragraph (g)(6)(ii) of this section; and

(7) Where an application is granted under this section, if a facility operated pursuant to that grant causes harmful, unauthorized interference to any cochannel or adjacent channel facility, it must promptly remedy the interference or immediately cease operations of the interfering facility, regardless of whether any petitions to deny or for other relief were filed against the application during the application process. The burden of proving that a facility operated under this section is not causing harmful, unauthorized interference lies on the licensee of the alleged interfering facility, following the filing of a documented complaint of interference by an affected party; and

(8) In the event any MDS or ITFS receive site suffers interference due to block downconverter overload, the licensee of each non-co/adjacent response station hub with a response service area within five miles of such receive site shall cooperate in good faith to expeditiously identify the source of the interference. Each licensee of a response station hub with an associated response station contributing to such interference shall bear the joint and several obligation to promptly remedy all block downconverter interference overload at any ITFS registered receive site or at any receive site within an MDS or ITFS protected service area applied for prior to the submission of the application for the response station hub license, regardless of whether the receive site suffering the interference was constructed prior to or after the construction of the response station(s) causing the downconverter overload; provided, however, that the licensee of the registered ITFS receive site or the MDS or ITFS protected service area must cooperate fully and in good faith with efforts by the response station hub licensee to prevent interference before constructing response stations and/or to remedy interference that may occur. In the event that the associated response station(s) of more than one response station hub licensee contribute(s) to block downconverter interference at an MDS or ITFS receive site, such hub licensees shall cooperate in good faith to remedy promptly the interference.

(h) Applicants must comply with part 17 of this chapter concerning notification to the Federal Aviation Administration of proposed antenna construction or alteration for all hub stations and associated response stations.

(i) Response station hubs shall be protected from cochannel and adjacent channel interference in accordance with the following criteria:

(1) An applicant for any new or modified MDS or ITFS station (including any high-power booster station or response station hub) shall be required to demonstrate interference protection to a response station hub within 160.94 km (100 miles) of the proposed facilities. In lieu of the interference protection requirements set forth in §§ 21.902(b)(3) through (b)(5), 21.938(b)(1) and (2) and (c), and 74.903 of this chapter, such demonstration shall establish that the proposed facility will not increase the effective power flux density of the undesired signals generated by the proposed facility and any associated main stations, booster stations or response

stations at the response station hub antenna for any sector. In lieu of the foregoing, an applicant for a new MDS or ITFS main station license or for a new or modified response station hub or booster license may demonstrate that the facility will not increase the noise floor at a reception antenna of the response station hub by more than 1 dB for cochannel signals and 45 dB for adjacent channel signals, provided that:

(i) the entity submitting the application may only invoke this alternative once per response station hub reception sector; or

(ii) the licensee of the affected response station hub may consent to receive a certain amount of interference at its hub.

(2) Commencing upon the filing of an application for an MDS response station hub license and until such time as the application is dismissed or denied or, if the application is granted, a certification of completion of construction is filed, the MDS station whose channels are being utilized shall be entitled both to interference protection pursuant to §§ 21.902(b)(3) through (b)(5), 21.938(b)(1) and (2) and (c), and 74.903 of this chapter, and to protection of the response station hub pursuant to the preceding paragraph. Unless the application for the response station hub license specifies that the same frequencies also will be employed for digital and/or analog point-to-multipoint transmissions by MDS stations and/or MDS booster stations, upon the filing of a certification of completion of construction of an MDS response station hub where the channels of an MDS station are being utilized as response station transmit frequencies, the MDS station whose channels are being utilized for response station transmissions shall no longer be entitled to interference protection pursuant to §§ 21.902(b)(3) through (b)(5), 21.938(b)(1) and (2) and (c), and 74.903 of this chapter within the response service area with regard to any portion of any 6 MHz channel employed solely for response station communications. Upon the certification of completion of construction of an MDS response station hub where the channels of an MDS station are being utilized for response station transmissions and the application for the response station hub license specifies that the same frequencies will be employed for point-to-multipoint transmissions, the MDS station whose channels are being utilized shall be entitled both to interference protection pursuant to §§ 21.902(b)(3) through (b)(5), 21.938(b)(1) and (2) and (c), and 74.903 of this chapter, and to protection of the response station hub pursuant to the preceding provisions of this paragraph.

(j) 125 kHz wide response channels shall be subject to the following requirements: The 125 kHz wide channel shall be centered at the assigned frequency. If amplitude modulation is used, the carrier shall not be modulated in excess of 100%. If frequency modulation is used, the deviation shall not exceed  $\pm 25$  kHz. Any emissions outside the channel shall be attenuated at the channel edges at least 35 dB below peak output power when analog modulation is employed or 35 dB below licensed average output power when digital modulation is employed (or, when subchannels are used, the appropriately adjusted value based upon the ratio of the channel-to-subchannel bandwidths). Any emissions more than 125 kHz from either channel edge, including harmonics, shall be attenuated at least 60 dB below peak output power when analog modulation is employed, or at least 60 dB below licensed average output power when digital

modulation is employed (or, when subchannels are used, the appropriately adjusted value based upon the ratio of the channel-to-subchannel bandwidths). Notwithstanding the foregoing, in situations where adjacent channel licensees jointly transmit over more than one contiguous channel utilizing digital modulation, the maximum out-of-band power shall be attenuated at the edges of those combined channels at least 35 dB relative to the licensed average power level of each channel. Emissions more than 125 kHz from either edge of the combined channels, including harmonics, shall be attenuated at least 60 dB below peak analog power or average digital power of each channel, as appropriate.

(k) A response station may be operated unattended. The overall performance of the response station transmitter shall be checked by the hub licensee as often as necessary to ensure that it is functioning in accordance with the requirements of the Commission's rules. The licensee of a response station hub is responsible for the proper operation of all associated response station transmitters. Each response station hub licensee is responsible for maintaining, and making available to the Commission upon request, a list containing all customer names and addresses, plus the technical parameters (EIRP, emission, bandwidth, antenna pattern/ height/ orientation/ polarization) pertinent to each class of response station within the response service area.

(l) The transmitting apparatus employed at MDS response stations shall have received type certification

(m) An MDS response station shall be operated only when engaged in communications with its associated MDS response station hub or MDS station or booster station, or for necessary equipment or system tests and adjustments. Upon initial installation, and upon relocation and reinstallation, a response station transmitter shall be incapable of emitting radiation unless, and until, it has been activated by reception of a signal from the associated MDS station or booster station. A hub station licensee shall be capable of remotely de-activating any and all response station transmitters within its RSA by means of signals from the associated MDS station or booster station. Radiation of an unmodulated carrier and other unnecessary transmissions are forbidden.

(n) All response stations utilizing an EIRP greater than 18 dBW shall be installed by the associated hub licensee or by the licensee's employees or agents. (Note: For the purposes of this section, all EIRP dBW values assume the use of a 6 MHz channel. For channel bandwidths other than 6 MHz, the EIRP dBW should be adjusted by  $10 \log(X/6)$  dBW, where X is the actual bandwidth in MHz) For response stations located within 1960 feet of an ITFS receive site registered and built prior to the filing of the application for the associated hub station license, the hub licensee must notify the licensee of the ITFS receive site at least one business day prior to activation of the response station, identifying both the specific ITFS receive site which is within 1960 feet of the response station to be activated and the specific hub station or stations with which the response station will communicate, and providing the name and telephone number of a contact person who will be responsible for coordinating the resolution of any interference

problems. Such notice to the ITFS licensee shall be given in writing by certified mail unless the ITFS licensee has requested delivery by electronic mail or facsimile. The ITFS licensee may waive the notification requirement on a site-specific basis, or on a system-wide basis. The notification provisions of this section shall not apply if:

(1) The response station will operate at an EIRP no greater than -6 dBW; or

(2) The response station will operate at an EIRP greater than -6 dBW and no more than 18 dBW and:

(i) The channels being received at the ITFS site are neither the same as, nor directly adjacent to, the channel(s) be transmitted from the response station; and

(ii) The hub station licensee has replaced, at its expense, the frequency downconverters used at all ITFS receive sites registered and constructed prior to the filing of the hub station application which are within 1960 feet of the hub station's response service area; and

(iii) The downconverters, at a minimum, conform to the following specifications:

(A) A frequency of operation covering the 2150-2162 MHz band or the 2500-2686 MHz band; and

(B) A third-order intercept point of 30 dBm; and

(C) A conversion gain of 32 dB, or the same conversion gain as the existing ITFS downconverter, whichever is least; and

(D) A noise figure of no greater than 2.5 dB, or no more than 1 dB greater than the noise figure of the existing ITFS downconverter, whichever is greater; and

(iv) The proposal to upgrade the ITFS downconverter was made in writing and served upon the affected ITFS licensee, conditional licensee or applicant at the same time the application for the response station hub license was served on cochannel and adjacent channel ITFS parties and no objection was made within the 60-day period allowed for petitions to deny the hub station application.

(o) Interference calculations shall be performed in accordance with Appendix D to the Report and Order on Reconsideration in MM Docket No. 97-217, FCC 99-178, "Methods For Predicting Interference From Response Station Transmitters and To Response Station Hubs and For Supplying Data on Response Station Systems." Compliance with the out-of-band emissions limitations shall be established in accordance with § 21.908(e).

20. In Section 21.910, the section heading and introductory text, paragraphs (a) and (b) are

revised, and paragraphs (c) and (d) are deleted to read as follows:

§ 21.910 Special procedures for discontinuance, reduction or impairment of service by common carrier licensees.

(a) Any licensee who has elected common carrier status and who seeks to discontinue service on a common carrier basis and instead provide service on a non-common carrier basis, or who otherwise intends to reduce or impair service the carrier shall notify all affected customers of the planned discontinuance, reduction or impairment on or before the date that the licensee provides notice to the Commission pursuant to § 21.903(d).

(b) Notice shall be in writing to each affected customer unless the Commission authorizes in advance, for good cause shown, another form of notice. Notice shall include the following:

- (1) Name and address of carrier; and
- (2) Date of planned service discontinuance, reduction or impairment; and
- (3) Points or geographic areas of service affected; and
- (4) How many and which channels are affected.

21. Section 21.913 is revised to read as follows:

§ 21.913 Signal booster stations.

(a) An MDS booster station may reuse channels to repeat the signals of MDS stations or to originate signals on MDS channels. The aggregate power flux density generated by an MDS station and all associated signal booster stations and all simultaneously operating cochannel response stations may not exceed  $-73 \text{ dBW/m}^2$  (or the appropriately adjusted value based on the actual bandwidth used if other than 6 MHz, see § 21.909(b)(7)(i)) at or beyond the boundary of the protected service area, as defined in §§ 21.902(d) and 21.933, of the main MDS station whose channels are being reused, as measured at locations for which there is an unobstructed signal path, unless the consent of the affected cochannel licensee is obtained.

(b) A licensee or conditional licensee may secure a license for a high power signal booster station that has a maximum EIRP in excess of  $-9 \text{ dBW} + 10 \log(X/6) \text{ dBW}$  where X is the channel width in MHz, if it complies with the out-of-band emission requirements of § 21.908. The applicant for a high-power station, or for modification thereto, where not subject to § 21.41 or § 21.42, shall file FCC Form 331 with Mellon Bank, and certify on that form that the applicant has complied with the additional requirements of paragraph (b) of this section, and that the interference data submitted under this paragraph is complete and accurate. Failure to certify compliance and to comply completely with the following requirements of paragraph (b) of this section shall result in dismissal of the application or revocation of the high-power MDS signal

booster station license, and may result in imposition of a monetary forfeiture. The applicant additionally is required to submit to the Commission's copy contractor, both in hard copy, and on a 3.5" DSDD computer diskette in ASCII, and likewise to submit to the Commission, only upon Commission staff request, duplicates of the Form 331 filed with Mellon Bank, and the following information:

(1) A demonstration that the proposed signal booster station site is within the protected service area, as defined in §§ 21.902(d) and 21.933, of the MDS station whose channels are to be reused; and

(2) A study which demonstrates that the aggregate power flux density of the MDS station and all associated booster stations and simultaneously operating cochannel response stations licensed to or applied for by the applicant, measured at or beyond the boundary of the protected service area of the MDS station whose channels are to be reused, does not exceed -73 dBW/m<sup>2</sup> (or the appropriately adjusted value based on the actual bandwidth used if other than 6 MHz, see § 21.907(b)(7)(i)) at locations for which there is an unobstructed signal path, unless the consent of the affected licensees has been obtained; and

(3) In lieu of the requirements of § 21.902(c) and (i), a study which demonstrates that the proposed booster station will cause no harmful interference (as defined in § 21.902(f)) to cochannel and adjacent channel, authorized or previously-proposed ITFS and MDS stations with protected service area center coordinates as specified in § 21.902(d), to any authorized or previously-proposed response station hubs, booster stations or I channel stations associated with such ITFS and MDS stations, or to any ITFS receive sites registered as of September 17, 1998, within 160.94 kilometers (100 miles) of the proposed booster station's transmitter site. Such study shall consider the undesired signal levels generated by the proposed signal booster station, the main station, all other licensed or previously-proposed associated booster stations, and all simultaneously operating cochannel response stations licensed to or applied for by the applicant. In the alternative, a statement from the affected MDS or ITFS licensee or conditional licensee stating that it does not object to operation of the high-power MDS signal booster station may be submitted; and

(4) A description of the booster service area; and

(5) A demonstration either

(i) That the booster service area is entirely within the protected service area to which the licensee of a station whose channels are being reused is entitled by virtue of its being the licensee of an incumbent MDS station, or by virtue of its holding a Basic Trading Area or Partitioned Service Area authorization; or

(ii) That the licensee entitled to any cochannel protected service area which is overlapped by the proposed booster service area has consented to such overlap; and

(6) A demonstration that the proposed booster service area can be served by the proposed booster without interference; and

(7) A certification that copies of the materials set forth in paragraph (b) of this section have been served upon the licensee or conditional licensee of each station (including each response station hub and booster station) required to be studied pursuant to paragraph (b)(3) of this section, and upon any affected holder of a Basic Trading Area or Partitioned Service Area authorization pursuant to paragraph (b)(2) of this section.

(c) Except as provided in § 21.27(d), applications for high-power MDS signal booster station licenses may be filed at any time. Notwithstanding any other provision of part 21 (including § 21.31), applications for high-power MDS signal booster station licenses meeting the requirements of paragraph (b) of this section shall cut-off applications that are filed on a subsequent day for facilities that would cause harmful electromagnetic interference to the proposed booster stations.

(d) Notwithstanding the provisions of § 21.30(a)(4) and except as provided in § 21.27(d), any petition to deny an application for a high-power MDS signal booster station license shall be filed no later than the sixtieth (60th) day after the date of public notice announcing the filing of such application or major amendment thereto. Notwithstanding § 21.31 and except as provided in § 21.27(d), an application for a high-power MDS signal booster station license that meets the requirements of paragraph (b) of this section shall be granted on the sixty-first (61st) day after the Commission shall have given public notice of the acceptance for filing of it, or of a major amendment to it if such major amendment has been filed, unless prior to such date either a party in interest timely files a formal petition to deny or for other relief pursuant to § 21.30(a), or the Commission notifies the applicant that its application will not be granted. Where an application is granted pursuant to the provisions of this paragraph, the conditional licensee or licensee shall maintain a copy of the application at the MDS booster station until such time as the Commission issues a high-power MDS signal booster station license.

(e) Eligibility for a license for a low power signal booster station that has a maximum EIRP of  $-9 \text{ dBW} + \log_{10}(X/6) \text{ dBW}$ , where  $X$  is the channel width in MHz, shall be restricted to a licensee or conditional licensee. A low-power MDS signal booster station may operate only on one or more MDS channels that are licensed to the licensee of the MDS booster station, but may be operated by a third party with a fully-executed lease or consent agreement with the MDS conditional licensee or licensee. An MDS licensee or conditional licensee may install and commence operation of a low-power MDS signal booster station for the purpose of retransmitting the signals of the MDS station or for originating signals. Such installation and operation shall be subject to the condition that for sixty (60) days after installation and commencement of operation, no objection or petition to deny is filed by the licensee of a, or applicant for a previously-proposed, cochannel or adjacent channel ITFS or MDS station with a transmitter within 8.0 kilometers (5 miles) of the coordinates of the low-power MDS signal booster station. An MDS licensee or conditional licensee seeking to install a low-power MDS signal booster station under this rule must, within 48 hours after installation, submit FCC Form 331 to the

Commission in Washington, DC, and submit to the Commission's copy contractor, both in hard copy, and on a 3.5" DSHD computer diskette in ASCII, duplicates of the Form 331 filed with the Commission, and the following (which also shall be submitted to the Commission only upon Commission staff request at any time):

(1) A description of the booster service area; and

(2) A demonstration either

(i) That the booster service area is entirely within the protected service area to which each licensee of a station whose channels are being reused is entitled by virtue of its being the licensee of an incumbent MDS station, or by virtue of its holding a Basic Trading Area or Partitioned Service Area authorization; or

(ii) That the licensee entitled to any cochannel protected service area which is overlapped by the proposed booster service area has consented to such overlap; and

(3) A demonstration that the proposed booster service area can be served by the proposed booster without interference; and

(4) A certification that:

(i) The maximum power level of the signal booster transmitter does not exceed  $-9 \text{ dBW} + 10 \log(X/6) \text{ dBW}$ , where X is the channel width in MHz; and

(ii) Where the booster is operating on channel D4, E1, F1, E2, F2, E3, F3, E4, F4 and/or G1, no registered receiver of an ITFS E or F channel station, constructed prior to May 26, 1983, is located within a 1.61 km (1 mile) radius of the coordinates of the booster, or in the alternative, that a consent statement has been obtained from the affected ITFS licensee; and

(iii) The applicant has complied with § 1.1307 of this chapter; and

(iv) Each MDS and/or ITFS station licensee (including the licensees of booster stations and response station hubs) with protected service areas and/or registered receivers within a 8 km (5 mile) radius of the coordinates of the booster has been given notice of its installation; and

(v) The signal booster site is within the protected service area of the MDS station whose channels are to be reused; and

(vi) The aggregate power flux density of the MDS station and all associated booster stations and simultaneously operating cochannel response stations licensed to or applied for by the applicant, measured at or beyond the boundary of the protected service

areas of the MDS stations whose channels are to be reused, does not exceed  $-73$  dBW/m<sup>2</sup> (or the appropriately adjusted value based on the actual bandwidth used if other than 6 MHz, see § 21.907(b)(7)(i)) at locations for which there is an unobstructed signal path, unless the consent of the affected licensees has been obtained; and

(vii) The antenna structure will extend less than 6.10 meters (20 feet) above the ground or natural formation or less than 6.10 meters (20 feet) above an existing manmade structure (other than an antenna structure); and

(viii) The MDS conditional licensee or licensee understands and agrees that, in the event harmful interference is claimed by the filing of an objection or petition to deny, the conditional licensee or licensee must terminate operation within two (2) hours of notification by the Commission, and must not recommence operation until receipt of written authorization to do so by the Commission.

(f) Commencing upon the filing of an application for a high-power MDS signal booster station license and until such time as the application is dismissed or denied or, if the application is granted, a certification of completion of construction is filed, an applicant for any new or modified MDS or ITFS station (including a response station hub, high-power booster station, or I Channels station) shall demonstrate compliance with the interference protection requirements set forth in §§ 21.902(b)(3) through (b)(5), 21.938(b)(1) and (2) and (c), or 74.903 of this chapter with respect to any previously-proposed or authorized booster service area both using the transmission parameters of the high-power MDS signal booster station (*e.g.*, EIRP, polarization(s) and antenna height) and the transmission parameters of the MDS station whose channels are to be reused by the high-power MDS signal booster station. Upon the filing of a certification of completion of construction of an MDS booster station applied for pursuant to paragraph (b) of this section, or upon the submission of an MDS booster station notification pursuant to paragraph (e) of this section, the MDS station whose channels are being reused by the MDS signal booster shall no longer be entitled to interference protection pursuant to §§ 21.902(b)(3) through (b)(5), 21.938(b)(1) and (2) and (c), and 74.903 of this chapter within the booster service area based on the transmission parameters of the MDS station whose channels are being reused. A booster station shall not be entitled to protection from interference caused by facilities proposed on or prior to the day the application or notification for the booster station is filed. A booster station shall not be required to protect from interference facilities proposed on or after the day the application or notification for the booster station is filed.

(g) Where an application is granted under paragraph (d) of this section, if a facility operated pursuant to that grant causes harmful, unauthorized interference to any cochannel or adjacent channel facility, it must promptly remedy the interference or immediately cease operations of the interfering facility, regardless of whether any petitions to deny or for other relief were filed against the application during the application process. The burden of proving that a high-power MDS signal booster station is not causing harmful, unauthorized interference lies on the licensee of the alleged interfering facility, following the filing of a documented complaint of interference by an affected party.

(h) In the event any MDS or ITFS receive site suffers interference due to block downconverter overload, the licensee of each non-co/adjacent channel signal booster station within five miles of such receive site shall cooperate in good faith to expeditiously identify the source of the interference. Each licensee of a signal booster station contributing to such interference shall bear the joint and several obligation to remedy promptly all interference resulting from block downconverter overload at any ITFS registered receive site or at any receive site within an MDS or ITFS protected service area applied for prior to the submission of the application or notification for the signal booster station, regardless of whether the receive site suffering the interference was constructed prior to or after the construction of the signal booster station(s) causing the downconverter overload; provided, however, that the licensee of the registered ITFS receive site or the MDS or ITFS protected service area must cooperate fully and in good faith with efforts by signal booster station licensees to prevent interference before constructing the signal booster station and/or to remedy interference that may occur. In the event that more than one signal booster station licensee contributes to block downconverter interference at an MDS or ITFS receive site, such licensees shall cooperate in good faith to remedy promptly the interference.

22. In Section 21.925, paragraph (b) is revised to read as follows:

§ 21.925 Applications for BTA authorizations and MDS station licenses.

\* \* \* \* \*

(b) Separate long-form applications must be filed for each individual MDS station license sought within the protected service area of a BTA or PSA, including:

(1) An application for each E-channel group, F-channel group, and single H, 1, and 2A channel station license sought;

(2) An application for each site where one or more MDS response station hub license(s) is/are sought, provided that the technical parameters of each MDS response station hub are the same;

(3) An application for each site where one or more MDS booster station(s) will operate with an EIRP in excess of -9 dBW (or, when subchannels or superchannels, or 125 kHz channels, are used, the appropriately adjusted value based upon the ratio of 6 MHz to the subchannel or superchannel, or 125 kHz, bandwidth);

(4) An application for authority to operate at an MDS station in the area vacated by an MDS station incumbent that has forfeited its station license; and

(5) An application for each ITFS-channel group station license sought in accordance with §§ 74.990 and 74.991 of this chapter.

\* \* \* \* \*

23. In Section 21.938, paragraph (b) introductory text, and paragraphs (c)(4), (e) and (f), are revised to read as follows:

§ 21.938 BTA and PSA technical and interference provisions.

\* \* \* \* \*

(b) Unless the affected parties have executed a written interference agreement in accordance with § 21.937, and subject to the provisions of §§ 21.909, 21.913, 21.949, 74.939 of this chapter, 74.949 of this chapter and 74.985 of this chapter regarding the protection of response station hubs, booster service areas and 125 kHz channels from harmful electromagnetic interference, stations licensed to a BTA or PSA authorization holder must not cause harmful electromagnetic interference to the following:

\* \* \* \* \*

24. New Section 21.949 is added, to read as follows:

§ 21.949 Individually licensed 125 kHz channel MDS response stations.

(a) The provisions of § 21.909(a), (d)(4), (e), (h), (j), (l) and (m), and § 74.939(j) of this chapter, also shall apply with respect to authorization of a 125 kHz channel(s) MDS response station not under a response station hub license. The applicant shall comply with the requirements of § 21.902, and § 21.938 where appropriate, including the provisions of §§ 21.909, 21.913, 74.939 of this chapter and 74.985 of this chapter regarding the protection of response station hubs and booster service areas from harmful electromagnetic interference, using the appropriately adjusted interference protection values based upon the ratio of the bandwidths in use, where the authorized or previously-proposed cochannel or adjacent channel station is operated or to be operated in a system with one or more response station hub(s).

**PART 74 -- EXPERIMENTAL RADIO, AUXILIARY, SPECIAL BROADCAST AND OTHER PROGRAM DISTRIBUTIONAL SERVICES**

25. The authority for part 74 continues to read as follows:

Authority: 47 U.S.C. 154, 303, 307, and 554.

26. The following definition is added to § 74.901:

Documented Complaint. A complaint that a party is suffering from non-consensual interference. A documented complaint must contain a certification that the complainant has contacted the

operator of the allegedly offending facility and tried to resolve the situation prior to filing. The complaint must then specify the nature of the interference, whether the interference is constant or intermittent, when the interference began and the site(s) most likely to be causing the interference. The complaint should be accompanied by a videotape or other evidence showing the effects of the interference. The complaint must contain a motion for a temporary order to have the interfering station cease transmitting. The complaint must be filed with the Secretary's office and served on the allegedly offending party.

27. In Section 74.902, paragraph (f) is revised to read as follows:

§ 74.902 Frequency assignments.

\* \* \* \* \*

(f) An ITFS licensee or conditional licensee may apply to exchange evenly one or more of its assigned channels with another ITFS licensee or conditional licensee in the same system, or with an MDS licensee or conditional licensee in the same system, except that an ITFS licensee or conditional licensee may not exchange one of its assigned channels for MDS channel 2A. The licensees or conditional licensees seeking to exchange channels shall file in tandem with the Commission separate pro forma assignment of license applications, each attaching an exhibit which clearly specifies that the application is filed pursuant to a channel exchange agreement. The exchanged channel(s) shall be regulated according to the requirements applicable to the assignee; provided, however, that an ITFS licensee or conditional licensee which receives one or more E or F Group channels through a channel exchange with an MDS licensee or conditional licensee shall not be subject to the restrictions on ITFS licensees who were authorized to operate on the E or F Group channels prior to May 26, 1983.

\* \* \* \* \*

28. In Section 74.903, paragraphs (a)(1) through (a)(3), paragraph (b) introductory text, paragraphs (b)(1), (2), (4) and (5), paragraph (c) and paragraph (d) are revised, paragraphs (e) and (f) are deleted, and new paragraph (a)(6) is added, to read as follows:

§ 74.903 Interference.

(a) \* \* \*

(1) Cochannel interference is defined as the ratio of the desired signal to the undesired signal, at the output of a reference receiving antenna oriented to receive the maximum desired signal level. Harmful interference will be considered present when a calculation using a terrain sensitive signal propagation model determines that this ratio is less than 45 dB (or the appropriate value for bandwidths other than 6 MHz. See below.)

(2) Adjacent channel interference is defined as the ratio of the desired signal to