

Women's Health, NIH, Room 201, Building 1, MSC 0161, Bethesda, MD 20892-0161 (telephone 301-402-1770; not a toll-free number.).

(3) NIH Guidelines for Research Involving Recombinant DNA Molecules (1994) (**Note:** To obtain copies of the policy, interested persons should contact the Office of Recombinant DNA Activities, NIH, 6000 Executive Boulevard, Suite 323, MSC 7010, Bethesda, MD 20892-7010 (telephone 301-496-9838; not a toll-free number).).

(4) "NIH Grants Policy Statement." NIH Pub. No. 99-80 (Oct. 1998) (**Note:** To obtain copies of the policy, interested persons should contact the Extramural Outreach and Information Resources Office (EOIRO), Office of Extramural Research, NIH, 6701 Rockledge Drive, Room 6208, MSC 7910, Bethesda, MD 20892-7910 (telephone 301-435-0714; not a toll-free number). Information may also be obtained by contacting the EOIRO via its e-mail address (asknih@odrockml.od.nih.gov) and by browsing the NIH Home Page site on the World Wide Web (<http://www.nih.gov>).).

(5) "Guide for the Care and Use of Laboratory Animals (1996). Institute of Laboratory Animal Resources, Commission on Life Sciences, National Research Council (**Note:** To obtain copies of the policy, interested persons should contact the Office for Protection from Research Risks, NIH, 6100 Executive Boulevard, Suite 3B01, MSC 7507, Rockville, MD 20852-7507 (telephone 301-496-7005; not a toll-free number).).

(6) "Public Health Service Policy on Humane Care and Use of Laboratory Animals." (Rev. Sept. 1986). Office for Protection from Research Risks, NIH (**Note:** To obtain copies of the policy, interested persons should contact the Office for Protection from Research Risks, NIH, 6100 Executive Boulevard, Suite 3B01, MSC 7507, Rockville, MD 20852-7507 (telephone 301-496-7005; not a toll-free number).).

(7) "Biosafety in Microbiological and Biomedical Laboratories." DHHS Publication No. (CDC) 88-8395 (1993). Centers for Disease Control and Prevention (CDC) (**Note:** To obtain copies of the policy, interested persons should contact the Division of Safety, Occupational Safety and Health Branch, NIH, 13 South Drive, Room 3K04, MSC 5760, Bethesda, MD 20892-5760 (telephone 301-496-2960; not a toll-free number).).

(8) "NIH Guidelines for the Laboratory Use of Chemical Carcinogens," DHHS Publication No. (NIH) 81-2385 (May 1981) (**Note:** To obtain copies of the policy, interested persons should contact the Division of Safety, Occupational Safety and Health Branch, NIH, 13 South Drive, Room 3K04, MSC 5760, Bethesda, MD 20892-5760 (telephone 301-496-2960; not a toll-free number).).

(9) "NIH Policy and Guidelines on the Inclusion of Children as Participants in Research Involving Human Subjects (March 6, 1998)." NIH Guide for Grants and Contracts (**Note:** To obtain copies of the policy, interested persons should contact the Office of Extramural Research, NIH, 6701 Rockledge Drive, Room 6208, MSC 7910, Bethesda, MD 20817-7910 (telephone 301-435-0714; not a toll-free number).).

Information may also be obtained by browsing the NIH Home Page site on the World Wide Web (<http://www.nih.gov>).).

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## FEDERAL COMMUNICATIONS COMMISSION

### 47 CFR Parts 21, 74 and 101

[MM Docket 97-217; FCC 99-178]

### MDS and ITFS Two-Way Transmissions

**AGENCY:** Federal Communications Commission.

**ACTION:** Final rule; reconsideration.

**SUMMARY:** In this document, the Commission makes changes to the rules adopted in previous order which enabled licensees in the Multipoint Distribution Service ("MDS") and Instructional Television Fixed Service ("ITFS") to engage in fixed two-way transmissions. These new rule changes further enhance the flexibility of MDS and ITFS operations by making certain technical modifications and by extending the streamlined application processing system to ITFS major modification applications.

**DATES:** Effective January 21, 2000.

#### FOR FURTHER INFORMATION CONTACT:

Dave Roberts (202) 418-1600, Video Services Division, Mass Media Bureau.

**SUPPLEMENTARY INFORMATION:** This is a synopsis of the Commission's *Report and Order on Reconsideration*, MM Docket, 97-217, adopted July 13, 1999 and released July 29, 1999. The full text of this *Reconsideration Order* is available for inspection and copying during normal business hours in the FCC Reference Room, Room CY-A257, Portals II, 445 12th Street, S.W., Washington, D.C., and also may be purchased from the Commission's copy contractor, International Transcription Services, Inc. ("ITS"), Portals II, 445 12th Street, S.W. Room CY-B402, Washington, D.C. 20554.

### Synopsis of Report and Order on Reconsideration on MDS and ITFS Two-Way Transmissions

#### I. Introduction

1. This *Reconsideration Order* is adopted by the Commission after receiving petitions for reconsideration of its Order in this docket. *Two-Way Order*, 63 FR 65087 (November 25, 1998). The *Order* was issued following a notice of proposed rulemaking, which arose from a petition for rulemaking filed by a group of 111 educators and

participants in the wireless cable industry (collectively, "Petitioners"), comprised of MDS and ITFS licensees, wireless cable operators, equipment manufacturers, and industry consultants and associations. Traditionally, MDS and ITFS had been one-way video service providers. The Petitioners sought rule changes which would facilitate the provision of two-way digital service by these providers. The *Order* (1) permitted both MDS and ITFS licensees to provide two-way services on a regular basis; (2) permitted increased flexibility on permissible modulation types; (3) permitted increased flexibility in spectrum use and channelization, including combining multiple channels to accommodate wider bandwidths, dividing 6 MHz channels into smaller bandwidths, and channel swapping; (4) adopted a number of technical parameters to mitigate the potential for interference among service providers and to ensure interference protection to existing MDS and ITFS services; (5) simplified and streamlined the licensing process for stations used in cellularized systems; and (6) modified the ITFS programming requirements in a digital environment. The *Reconsideration Order* further modified some of the technical rules and extended the streamlined application processing system to all ITFS modification applications. These rule changes were designed to provide greater flexibility to operators in the design and operation of systems. We believe that the rule modifications we adopt in the *Reconsideration Order* will facilitate the most efficient use of the affected spectrum, enhance the competitiveness of the wireless cable industry, and provide benefits to the educational community through the use of two-way services, while still permitting traditional use of the spectrum, thus giving both MDS and ITFS licensees the flexibility they need to serve the public interest.

#### II. Procedural Changes to Rules

##### A. Application Processing Issues

2. In the *Order*, we adopted an application processing system that will substantially shift review of applications for new or modified response station hubs, boosters or downstream I Channel operations from Commission staff and leave much of the interference environment to be worked out by licensees. This system will now be extended to all ITFS modification applications. This system includes a one-day rolling filing window system. Each applicant will be required to

demonstrate protection of existing or previously proposed facilities, but applications filed on the same day will be granted and the filers left to resolve incompatibilities among themselves with little or no intervention by Commission staff. Because parties will be unable to offer reliable service without resolving such conflicts, we believe that the incentive to reach a resolution will be so great that Commission involvement will be unnecessary to resolve disputes.

3. Applications will be placed on public notice without prior staff review of interference studies. The applicant must certify that it has completed, served upon potentially affected parties, and submitted to the Commission's copy contractor all required interference studies (or consent letters) and engineering showings demonstrating no interference. Before placing an application on public notice, Commission staff will review it to ensure that all required certifications are included, and any application that does not contain proper certifications will be dismissed. The application will be granted in reliance on the certifications on the 61st day after public notice, unless a petition to deny is filed or the application is subject to a random audit. A false certification will result in denial of the application and be grounds for license revocation. Though consistent with similar certification procedures that have been adopted for other communications services, this approach is particularly appropriate for MDS and ITFS, because of the interdependent and cooperative nature of the services. Any system causing non-consensual interference must cure it immediately or face shut-down, even if the relevant station applications had been unopposed.

4. Because a large number of potentially conflicting applications are likely to be filed as soon as the new rules become effective, we have adopted a special one-week initial filing window, which will be announced by public notice. All applications filed during that window will be deemed filed as of the same day. Following the public notice announcing the filing of the applications submitted during that window, applicants will have a period of 60 days, during which no additional applications may be filed, to amend their applications and resolve conflicts. This 60-day period is the only time at which amendments may be made to any engineering portion of the application. Such amendments are not permitted once the rolling one-day filing window is in place. At the end of the 60-day period, the applications, as amended

where applicable, will again be placed on public notice and be at that time subject to the same petition to deny, audit and grant procedures as during the one-day rolling filing window. We believe that our adoption of the one-week initial filing window will lessen the burden on all affected parties, including the Commission's staff, during the first round of application filing. We also believe that providing parties with an initial 60-day period during which they can resolve any apparent conflicts and then amend their applications without prejudice will serve to expedite service to the public by allowing parties to resolve their differences without the need to seek Commission review through the petition to deny process.

5. When parties seek to create two-way systems that make the most efficient use of spectrum and that respond most effectively to public needs, it often will be necessary to make major modifications to existing ITFS facilities. Under the old system, these major modifications could only be sought in the context of a filing window. Waiting for such a filing window could seriously impede the creation of two-way systems and delay service to the public. We believe that by expanding the streamlined application processing system to cover all ITFS modification applications, including those which formerly required a window for filing, will greatly facilitate the creation of effective two-way systems to the benefit of MDS and ITFS licensees as well as to consumers.

#### B. Interference Complaints

6. In the *Two-Way Order*, we stated that a "documented complaint" was required in the event of non-consensual interference in order to compel mandatory shut-down of an allegedly interfering station. At the urging of Petitioners and other parties, in the *Reconsideration Order*, we set out the requirements for such a complaint.

7. Because the two-way paradigm is premised on cooperation between the parties, the documented complaint must contain a certification that the complainant has contacted the operator of the allegedly offending facility and attempted to resolve the situation before filing. The complaint must also 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. Where possible evidence demonstrating the effects of the interference should be included. Finally, the complaint must contain a motion for a temporary order that the

interfering station cease transmitting. The complained against party shall have two business days from the date of filing to respond and the burden of proof lies on the complained against party. If we find in favor of the complainant, we shall order immediate shut-down of the facility and the operator of that facility must submit proof that the interference has been cured before it will be allowed to recommence operations.

#### C. Interference

8. *Registration of ITFS Receive Sites.* The Catholic Television Network ("CTN") asked us clarify that we will continue to register ITFS receive sites. However, because we granted each ITFS licensee a 35-mile protected service area ("psa") and granted individual protection to all receive sites registered through the date of adoption of the *Two-Way Order*, we instead make clear that we will not any longer register ITFS receive sites. BellSouth requested that we hold that point-to-point ITFS receive sites would not be entitled to a psa. We reject that request because it would place an unacceptable burden on ITFS licensees who wish to convert from point-to-point to point-to-multipoint transmission in the future.

9. *Advance Notification and Professional Installation.* In the *Two-Way Order*, we created a notification zone with a radius of 1960 feet around each ITFS receive site and required that the associated hub station licensee notify the appropriate ITFS licensee by certified mail at least 20 days prior to activation of any response station. We also required that response station transmitters be professionally installed to help prevent interference and to minimize the risk of human exposure to potentially hazardous radio-frequency ("RF") emissions. In the *Reconsideration Order*, we modify these requirements in certain circumstances.

10. We amend our rules to eliminate the notification and professional installation requirements for digital response stations in two-way cellularized systems utilizing no more than 18 dBW EIRP, contingent upon the operator of the associated hub station providing and installing replacement downconverters at registered ITFS receive sites with the outer edge to response station service area add beyond to a distance of 1960 feet. We also completely eliminate the professional installation and notification requirements for any response station operating with EIRP no greater than -6 dBW. In both cases, the problems these rules were meant to address, downconverter overload and unsafe exposure to RF emissions, are unlikely

to be caused as a result of the use of improved equipment in the first case and the very low power levels involved in the second case. Both of these changes should facilitate the installation of a very large number of response stations without the need for advance notification or professional installation, thereby cutting costs and making the service more affordable for users. We also waive our rules to permit the use of omnidirectional antennae at any response station with an EIRP no greater than -6 dBW. We also amended our rules to permit an ITFS licensee to waive the professional installation and advance notification requirements in regard to its own facilities.

11. *Timing and Method of Advance Notification.* Except for those stations which are subject to one of the exceptions we adopted, we retain our advance notification requirement, but reduce the timing of the notification to one business day in advance of such activation. The main purpose of the advance notification requirement is to jump-start the interference identification process and we are persuaded that one business day is sufficient for that purpose. At the same time, this time period allays the concerns expressed by some parties of the anti-competitive effects of a longer period. We also will permit the notification to be performed by fax or e-mail if the ITFS licensee has elected to receive it by either of these methods.

#### D. Technical Standards

12. *Spectral Mask.* We clarify that for emissions such as QPSK and 4-QAM, the "flat top" portion of the signal is the only point within the channel at which a correct comparison of the relative levels of in-band and out-of-band power can be taken. We also emphasize that such emissions are constrained in terms of maximum permissible EIRP by the degree to which they are non-uniform.

13. *Frequency Tolerance.* We amend the frequency tolerance requirement to 0.001% for non-VSB digital emissions, because this will not increase the potential for interference from these stations and will reduce the cost of manufacturing the oscillators used in these transmitters very significantly.

14. *Other Technical Considerations.* We agree with CTN that the terms "free space" and "unobstructed path" in the rule pertaining to interference calculations are used inconsistently and replace them with the term "terrain sensitive methodology." We also clarify that only the Epstein-Peterson signal propagation model may be used for interference calculations performed in accordance with Appendix D of both the

*Two-Way Order* and the *Reconsideration Order.*

15. *Use of 125 kHz Channels.* Consistent with our decision to broaden the field of ITFS and MDS applications subject to streamlined processing, we permit applications for traditional return-path use of I channels to be filed under that system. We reject CTN's proposal to make all downstream operations on the I Channel secondary, this would undermine our goals of flexibility and efficiency in the spectrum.

#### E. Issues Primarily Involving ITFS

16. *Channel Swapping and Shifting.* In the *Two-Way Order*, we authorized the use of channel swapping and shifting in systems where some party was using digital transmissions to provide maximum system flexibility and to give ITFS licensees flexibility in fulfilling their educational requirements. We now expand this authorization to permit channel swapping and shifting regardless of whether digital transmissions are employed. This will further maximize the flexibility of the service and benefit the public.

17. *Grandfathering of Excess Capacity Lease Provisions.* We clarified that a lease containing a provision that automatically extended a 10-year initial term (formerly the maximum allowable term) to the maximum allowed by the Commission, did not lose its grandfathered status. However, we also clarified that a provision that simply automatically renewed the lease did not protect the leases grandfathered status. The first clarification will prevent any need for a mass renegotiation of leases, while the second will prevent leases from being grandfathered into perpetuity.

#### F. Booster Stations

18. We amend our rules to make clear that a high-power booster may be utilized for digital and/or analog modulation, and that two-way operations are not a prerequisite for licensing a high-power booster. We also will permit ITFS excess-capacity lessees to apply for booster stations on ITFS frequencies if (1) the have the written consent of the main station licensee and (2) the lease contains a provision that requires the lessee to offer to assign the booster licenses to the main station licensee for purely nominal consideration upon lease termination.

#### G. Digital Declaratory Ruling

19. *Limited Exception to the Protected Service Area Definition for Modifications.* Under our Rules, a

modifying applicant may secure a waiver of the 35 mile psa definition and maintain "grandfathered" interference subject to six conditions: (1) the modification is filed after the effective date of the expanded psa; (2) the station being modified was authorized or proposed prior to that date; (3) the desired station was authorized on or before the effective date; (4) the predicted interference does not occur within the 710 square mile psa of the desired station; (5) the modification does not increase the size of the area suffering harmful interference; and (6) the modification does not result in any new interference to the desired station's psa. This exception may be expanded for any modification not resulting in new interference to the desired station's psa nor increasing the size of the area suffering harmful interference to effectively nullify the fourth condition of the exception and allow preexisting interference even with the former 70 square mile psa which pertained prior to September 15, 1995. We also expand the exception to cover any modification application where either the modifying or desired station was proposed after the effective date of the expanded psa.

20. *Rights of Licensees Where Digital Operation Affects Use of Frequency Offset.* We will continue to evaluate involuntary frequency offset proposals on a case-by-case basis. We also decline to mandate, at this time, a particular frequency offset or tolerance for the pilot carrier stations utilizing VSB digital modulation.

#### H. Procedural Matters

##### Ordering Clauses

21. Accordingly, It is ordered that the above-referenced petitions for reconsideration and/or clarification of the *Order* are *granted in part and denied in part*, as described above.

22. *It is further ordered* that the above-referenced petitions for clarification of the *Digital Declaratory Ruling* are *granted in part and denied in part*, and that the *Declaratory Ruling on the Use of Digital Modulation by Multipoint Distribution Service and Instructional Television Fixed Service Stations* is *modified and clarified* to the extent specified above. These modifications and clarifications shall be effective upon the release of this order.<sup>1</sup>

23. *It is further ordered* that the application for review of the October 17 Public Notice, filed November 18, 1996 by CAI Wireless Systems, Inc., is *dismissed as moot*.

24. *It is further ordered* that, pursuant to the authority contained in Sections

<sup>1</sup> See 47 CFR 1.4(b)(2) and 1.103.

4(i) and (j), 301, 303(f), 303(g), 303(h), 303(j), 303(r), 308(b), 403, and 405 of the Communications Act of 1934, as amended, 47 U.S.C. 154(i), 154(j), 301, 303(f), 303(g), 303(h), 303(j), 303(r), 308(b), 403, and 405, this Report and Order on Reconsideration *is adopted*, the *Order is modified and clarified* to the extent specified above, and Parts 21, 74 and 101 of the Commission's Rules, 47 CFR 21, 74 and 101 *are amended* as set forth in the Rule Changes.

25. The action contained herein has been analyzed with respect to the Paperwork Reduction Act of 1995 and found to impose new or modified reporting and recordkeeping requirements or burdens on the public. Implementation of these new or modified reporting and recordkeeping requirements will be subject to approval by the Office of Management and Budget (OMB) as prescribed by the Act. The new or modified paperwork requirements contained in this *Report and Order on Reconsideration* (which are subject to approval by OMB) will go into effect upon OMB approval. However, *it is further ordered* that the rule amendments set forth in Appendix C not pertaining to new or modified reporting or recordkeeping requirements *will become effective* January 21, 2000.

26. As required by Section 604 of the Regulatory Flexibility Act, 5 U.S.C. 604, the Commission has prepared a Supplemental Final Regulatory Flexibility Analysis of the possible impact on small entities of the rules and policies adopted in this document. *See* Appendix B. *It is further ordered* that the Commission's Office of Public Affairs, Reference Operations Division, *shall send* a copy of this *Report and Order on Reconsideration*, including the Supplemental Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

## List of Subjects

### 47 CFR Part 21

Communications common carriers, Communications equipment, Reporting and recordkeeping requirements, Television.

### 47 CFR Part 74

Communications equipment, Education, Reporting and recordkeeping requirements, Television.

### 47 CFR Part 101

Fixed Microwave Services.

Federal Communications Commission.

**Magalie Román Salas,**  
*Secretary.*

## Rule Changes

For the reasons discussed in the preamble, the Federal Communications Commission amends 47 CFR parts 21, 74 and 101 as follows:

## PART 21—DOMESTIC PUBLIC FIXED RADIO SERVICES

1. The authority citation 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.

2. Section 21.2 is amended by adding the definition of “Documented complaint” and by revising the first sentence of the definition of “Response station hub” to read as follows:

### § 21.2 Definitions

\* \* \* \* \*

**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.

\* \* \* \* \*

**Response station hub.** A fixed facility licensed to an MDS licensee, and operated by an MDS licensee or the lessee of an MDS facility, for the reception of information transmitted by one or more MDS response stations that utilize digital modulation. \* \* \*

\* \* \* \* \*

### § 21.11 [Amended]

3. Section 21.11(d) is amended by removing the number “702” and adding, in its place, the number “305,” and in paragraph (e) by removing the number “704” and adding, in its place, the number “306.”

4. Section 21.23 is amended by revising paragraph (c)(1)(vi) and by adding paragraph (c)(2) to read as follows:

### § 21.23 Amendment of applications.

\* \* \* \* \*

(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) of this part, 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.

\* \* \* \* \*

5. Section 21.31 is amended by revising paragraph (a) and removing paragraph (e)(6)(iv) to read as follows:

### § 21.31 Mutually exclusive applications.

(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.

\* \* \* \* \*

6. Section 21.101 is amended by revising footnote 2 to paragraph (a) to read as follows:

### § 21.101 Frequency tolerance.

\* \* \* \* \*

<sup>2</sup>Beginning January 21, 2000, the equipment authorized to be used at all MDS main stations, and at all MDS booster stations authorized pursuant to § 21.913(b) of this part, shall maintain a frequency tolerance of 0.001%. MDS booster stations authorized pursuant to § 21.913(e) of this part and MDS response stations authorized pursuant to § 21.909 of this part shall employ transmitters with sufficient frequency

stability to ensure that the emission is, at all times, within the required emission mask.

7. 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.

8. Section 21.900 is amended by redesignating paragraphs (a), (b), and (c) as paragraphs (a)(1), (a)(2), and (a)(3) respectively, by designating the introductory text as paragraph (a) introductory text, and by designating the concluding text as paragraph (b) and revising it to read as follows:

**§ 21.900 Eligibility.**

(b) 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.

9. Section 21.901 is amended by revising paragraph (d) to read as follows:

**§ 21.901 Frequencies.**

(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.

10. Section 21.902 is amended by revising paragraphs (b)(3), (b)(4), (b)(7), (f)(1), (f)(2)(i), (f)(2)(ii), (i)(1), (i)(2), (i)(4) introductory text, (i)(4)(iii) through (i)(4)(v), (i)(6)(i) introductory text, (i)(6)(iii)(E), (i)(6)(iii)(F) and (i)(6)(iv) 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.)

(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.)

(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 emissions; 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 or one station is utilizing digital 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.)

(2) \*\*\*

(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.)

(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.) unless:

(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.

\* \* \* \* \*

#### § 21.903 [Amended]

11. Section 21.903 is amended by revising paragraph (d) 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.

12. Section 21.904 is revised to read as follows:

#### § 21.904 EIRP limitations.

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

(b)(i) 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:

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

(ii) Beamwidth is the total horizontal plane beamwidth of the individual transmitting antenna for the station or any sector measured at the half-power points.

(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. unfiltered 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, i.e., 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.

13. Section 21.905 is amended by revising paragraphs (b) and (d) introductory text 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 of this part. 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 of this part 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 of this part may be used in the following circumstances:

\* \* \* \* \*

14. Section 21.906 is amended by revising paragraph (a) and by removing the third sentence from paragraph (d) 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).

\* \* \* \* \*

15. Section 21.909 is amended by revising the last sentence of paragraph (a), paragraphs (b), (c) and (d), (g)(3), (g)(6)(i), (g)(6)(ii), (g)(8), (h), (k), (m), (n), and the first sentence of paragraph (o) to read as follows:

#### § 21.909 MDS response stations.

(a) \* \* \* 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, provided that the conditions set forth in paragraph (g) of this section are met and that the MDS response stations' technical parameters are consistent with all applicable rules in this part and with the terms and conditions set out in 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 the following to the Commission's copy contractor, both in hard copy and on sequential 3.5" DSHD computer diskettes in ASCII for all Appendix D data and in a format to be specified by public notice for all other submissions:

(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" as amended; 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, in a format to be specified by the Commission at a later date, the following:

(1) 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

(2) 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.

(3) 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.

(g) \* \* \*

(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

\* \* \*

(6) \* \* \*

(i) First notifies the Commission, in a format to be specified by public notice, 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 set of sequential 3.5" DSHD diskettes in ASCII format which update the previously filed response station data (see § 21.909(c)(2)(ii) of this part) and with an analysis, in a format to be specified by public notice 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 of this part or § 74.949 of this chapter; or that the applicant for or licensee of such facility has consented to such interference; 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 overload interference 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.

\* \* \* \* \*

(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.

\* \* \* \* \*

(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. 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 values should be adjusted up (channel >6 MHz) or down (channel <6 MHz) by  $10 \log(X/6)$  dBW, where X is the channel width 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 hub station license, the hub licensee must notify the licensee of the ITFS receive site at least one business day prior to the activation of these response stations. The notification must contain, for each response station to be activated, the following information: name and telephone number of a contact person who will be responsible for coordinating the resolution of any interference problems; street address; geographic coordinates to the nearest second; channels/subchannels (transmit only); and transmit antenna pattern, EIRP, orientation and height AMSL. (If transmit antenna pattern, EIRP, orientation or height AMSL are not known with specificity at the time of notification, the hub licensee may, instead, specify the worst-case values for the class of response station being activated.) Such notice to the ITFS licensee shall be given in writing by certified mail unless the ITFS licensee has requested delivery by email 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) to 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" as amended.

\* \* \*

16. Section 21.910 is amended by revising the section heading, removing the introductory text, revising paragraphs (a) and (b), and removing paragraphs (c) and (d) 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.

17. Section 21.913 is amended by removing paragraph (e)(4) and redesignating paragraph (e)(5) as (e)(4), and revising paragraphs (a), (b), (e) introductory text, (e)(1), (e)(4)(i), (e)(4)(vi), and (h) 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  $-73$  dBW/m<sup>2</sup> (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  $-9$  dBW +  $10 \log(X/6)$  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 (and to the Commission upon staff request), both in hard copy, and on sequential 3.5" DSHD computer diskettes in a form to be specified by the

Commission by public notice, 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.

\* \* \* \* \*

(e) Eligibility for a license for a low power signal booster station that has a maximum EIRP of  $-9$  dBW +  $10 \log(X/6)$  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 (and to the Commission upon staff request), both in hard copy, and on sequential 3.5" DSHD computer diskettes in a format to be specified by public notice, 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

\* \* \* \* \*

(4) \* \* \*

(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

\* \* \* \* \*

(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  $-73 \text{ dBW/m}^2$  (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

\* \* \* \* \*

(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.

#### § 21.938 [Amended]

18. Section 21.938(b) is amended by removing §§ 21.940 and 74.940 and adding, in their place, §§ 21.949 and 74.949, respectively.

19. Section 21.949 is amended by revising paragraphs (a), (b) introductory text, and the first sentence of paragraph (d) and adding paragraph (b)(5) to read as follows:

#### § 21.949 Individually licensed 125 kHz channel MDS response stations.

(a) The provisions of § 21.909(a), (e), (h), (j), (l) and (m) and § 74.939(j) of this chapter shall also apply with respect to authorization of 125 kHz channel MDS response stations not authorized under a response station hub license. The applicant shall comply with the requirements of § 21.902 and § 21.938 where appropriate, as well as with the provisions of §§ 21.909, 21.913, 74.939 and 74.985 of this chapter regarding the protection of response stations hubs and booster (and primary) service areas from harmful electromagnetic interference, using the appropriately adjusted interference protection values based upon the ratios of the bandwidths involved.

(b) An application for a license to operate a new or modified 125 kHz channel MDS response station not under a response station hub license shall be filed with Mellon Bank on FCC Form 331. The applicant shall supply the following information and certification on that form for each response station:

\* \* \* \* \*

(5) A certification that all licensees and applicants appropriately covered under the provisions of (a), above, have been served with copies of the application.

\* \* \* \* \*

(d) During breaks in communications, the unmodulated carrier frequency of an analog transmission shall be maintained within 35 kHz of the assigned frequency at all times. \* \* \*

\* \* \* \* \*

#### PART 74—EXPERIMENTAL RADIO, AUXILIARY, SPECIAL BROADCAST AND OTHER PROGRAM DISTRIBUTIONAL SERVICES

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

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

#### § 74.901 [Amended]

21. Section 74.901 is amended by adding the definition of "Documented complaint" 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.

\* \* \* \* \*

22. Section 74.902 is amended by revising the first sentence of paragraph (f) 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. \* \* \*

\* \* \* \* \*

23. Section 74.903 is amended by revising paragraphs (a)(1), (a)(2)(i), (a)(2)(ii) introductory text, (a)(6) and the last sentence of paragraph (b) introductory text, and revising (b)(5) 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.)

(2) \* \* \*

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

(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 signal propagation model determines that this ratio is less than 10 dB (or the appropriate value for bandwidths other than 6 MHz), unless:

\* \* \* \* \*

(6) 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 emissions; 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 or one station is utilizing digital 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:  $0 \text{ dB} + 10 \log(X_1/X_2)$ , where  $X_1$  is the bandwidth in MHz of the protected channel and  $X_2$  is the bandwidth in MHz of the interfering channel.

(b) \* \* \* An applicant for a new instructional television fixed station must include the following technical information with the application:

\* \* \* \* \*

(5) Specific rules relating to response station hubs, booster stations, and 125 kHz channels are set forth in §§ 21.909, 21.913, 21.949, 74.939, 74.949 and 74.985. To the extent those specific rules are inconsistent with any rules set forth above, those specific rules shall control.

\* \* \* \* \*

24. Section 74.911 is revised to read as follows:

#### **§ 74.911 Processing of ITFS station applications.**

(a) Applications for ITFS stations are divided into three groups:

(1) In the first group are applications for new stations. These applications are subject to the provisions of paragraph (c) of this section.

(2) In the second group are applications for major changes in the facilities of authorized stations. A major change for an ITFS station will be any proposal to add new channels, change from one channel (or channel group) to another, except as provided for in § 74.902(f), change polarization, increase the EIRP in any direction by more than 1.5 dB, increase the transmitting antenna height by 25 feet or more, or relocate a facility's transmitter site by 10 miles or more. Major change applications are subject to paragraphs (d) and (e) of this section.

(3) The third group consists of applications for all other licenses and all other changes in the facilities of authorized stations.

(b) A new file number will be assigned to an application for a new station or for major changes in the facilities of an authorized station, when it is amended so as to effect a major change, as defined in paragraph (a)(2) of this section, or results in a situation where the original party or parties to the application do not retain control of the applicant as originally filed. An application for change in the facilities of any existing station will continue to carry the same file number even though (pursuant to Commission approval) an assignment of license or transfer of control of such licensee or permittee has taken place if, upon consummation, the application is amended to reflect the new ownership.

(c) (1) The FCC will specify by Public Notice, pursuant to § 73.5002, a period for filing ITFS applications for a new station. Such ITFS applicants shall be subject to the provisions of § 1.2105 and the ITFS competitive bidding procedures. See 47 CFR 73.5000, *et. seq.*

(2) The requirements of this section apply to a wireless cable entity requesting to be licensed on ITFS frequencies pursuant to § 74.990.

(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 all major changes, high-power signal booster station, response station hub, and I channels point-to-multipoint transmissions licenses, during which all applications shall be deemed to have been filed as of the same day for purposes of §§ 74.939 and 74.985. 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 additional 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 major changes, new or modified response station hub, high powered signal booster and booster station licenses may be filed and will be processed in accordance with the provisions of §§ 74.939 and 74.985. 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 § 74.912, 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.

(e) Except as provided in paragraph (d) of this section, major change applications may be filed at any time. Except during the sixty (60) day amendment period provided for in paragraph (d) of this section, any amendment to a major change application 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, shall cause the application to be considered newly-filed. Notwithstanding any other provision of part 74, major change applications meeting the requirements of part 74 shall cut-off applications that are filed on a subsequent day for facilities that would cause harmful electromagnetic interference to the facilities proposed in the major change

application. A facility proposed in a major change application shall not be entitled to protection from interference caused by any facilities proposed on or prior to the day the major change application is filed. A facility proposed in a major change application shall not be required to protect from interference facilities proposed on or after the day the major change application is filed. Except as provided by paragraph (d) of this section, any petition to deny a major change application shall be filed no later than the sixtieth (60th) day after the date of public notice announcing the filing of such application. Except as provided in paragraph (d) of this section a major change application that meets the requirements of part 74 shall be granted on the sixty-first (61st) day after the Commission shall have given public notice of the acceptance for filing of it, unless prior to such date either a party in interest files a timely petition to deny or files for other relief pursuant to § 74.912, or the Commission notifies the applicant that its application will not be granted at such time. 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 facility until such time as the Commission issues a license for that facility's operations.

25. Section 74.931 is amended by revising paragraphs (c)(3), (c)(6)(ii), (d) introductory text, (d)(1), (d)(6)(ii), and (d)(6)(iii) to read as follows:

**§ 74.931 Purpose and permissible service.**

\* \* \* \* \*

(c) \* \* \*

(3) The licensee may shift its requisite ITFS educational usage onto fewer than its authorized number of channels, via channel mapping or channel loading technology, so that it can lease full-time channel capacity on its ITFS station and/or associated ITFS booster stations, subject to the condition that it provide a total average of at least 20 hours per channel per week of ITFS educational usage on its authorized channels. The use of channel mapping or channel loading consistent with the Rules shall not be considered adversely to the ITFS licensee in seeking a license renewal. The licensee also retains the unbridgeable right to recapture, subject to six months' advance written notification by the ITFS licensee to its lessee, an average of an additional 20 hours per channel per week, accounting for all recapture already exercised. The licensee may agree to the transmission of this recapture time on channels not authorized to it, but which are included in the wireless system of which it is a

part. A licensee under this paragraph which leases excess capacity to an operator which utilizes digital transmissions on any one of the licensee's licensed channels may "channel shift" pursuant to and under the conditions of paragraph (d)(2) of this section.

(6) \* \* \*

(ii) An ITFS 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.

(d) A licensee utilizing digital transmissions on any of its licensed channels may use excess capacity on each channel to transmit material other than the ITFS subject matter specified in paragraphs (a) and (b) of this section, subject to the following conditions:

(1) The licensee must reserve a minimum of 5% of the capacity of its channels for instructional purposes only, and may not lease this reserved capacity. In addition, before leasing excess capacity, the licensee must provide at least 20 hours per licensed channel per week of ITFS educational usage. This 5% reservation and this 20 hours per licensed channel per week ITFS educational usage requirement shall apply spectrally over the licensee's whole actual service area.

\* \* \* \* \*

(6) \* \* \*

(ii) An ITFS 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.

(iii) Licensees under paragraph (d)(6) of this section additionally shall comply with the provisions of §§ 21.304, 21.900(b), 21.903(b)(1), 21.903(b)(2), 21.903(c), and 21.910 of this chapter.

\* \* \* \* \*

26. Section 74.932 is amended by revising paragraph (a)(4) to read as follows:

**§ 74.932 Eligibility and licensing requirements.**

(a) \* \* \*

(4) Those applicant organizations whose eligibility is established by service to accredited institutional or governmental organizations must submit documentation from proposed receive sites demonstrating that they will receive and use the applicant's educational usage. In place of this documentation, a state educational television (ETV) commission may demonstrate that the public schools it proposes to serve are required to use its proposed educational usage.

\* \* \* \* \*

27. Section 74.935 is amended by revising the section heading, paragraphs (a) through (c) and by adding paragraph (e) to read as follows:

**§ 74.935 EIRP limitations.**

(a) The maximum EIRP of a main or booster station shall not exceed 33 dBW + 10log(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 over a 6 MHz channel in dBW 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.

(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 an applicant demonstrates that the requested EIRP 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.

\* \* \* \* \*

(e) For main, booster and response stations utilizing digital emissions with non-uniform power spectral density (e.g. unfiltered 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, i.e., 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.

28. Section 74.936 is amended by revising paragraphs (a) and (b) introductory text to read as follows:

**§ 74.936 Emissions and bandwidth.**

(a) An ITFS station may employ amplitude modulation (C3F) for the transmission of the visual signal and frequency modulation (F3E) or (G3E) for the transmission of the aural signal when transmitting a standard analog television signal. 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 subsequently *Digital 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 ITFS response stations authorized pursuant to § 74.939. 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 § 74.936 are met at the edges of the channels employed. The wider channels thus created may be redivided to create narrower channels.

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

\* \* \* \* \*

29. Section 74.939 is amended as follows:

- (1) by revising paragraph (b);
- (2) revising paragraph (c);
- (3) removing paragraph (d)(1);
- (4) redesignating paragraphs (d)(2) and (d)(3) as paragraphs (d)(1) and (d)(2);
- (5) revising newly redesignated paragraphs (d)(2)(iii), (d)(2)(iv), (d)(2)(v) introductory text; (d)(2)(v)(A);
- (6) revising the second sentence of paragraph (f);
- (7) revising paragraphs (g)(3), (g)(6)(i), (g)(6)(ii), (g)(8);
- (8) revising paragraph (h);
- (9) revising paragraph (i)(2);
- (10) revising the second sentence of paragraph (l)(1), (l)(2) introductory text;
- (11) adding paragraph (l)(6);
- (12) revising paragraph (m);
- (13) revising paragraph (o);
- (14) revising paragraph (p); and
- (15) revising the first sentence of paragraph (q).

The additions, removals and revisions are set out as follows:

**§ 74.939 ITFS response stations.**

\* \* \* \* \*

(b) ITFS response stations that utilize the 2150-2162 MHz band pursuant to § 74.902(f), the 2500-2686 MHz band, and/or the 125 kHz channels identified in paragraph (j) of this section may be installed and operated without an individual license, to communicate with a response station hub, provided that the conditions set forth in paragraph (g) of this section are met and that ITFS response stations' technical parameters are consistent with all applicable rules in this part and with the terms and

conditions set out in 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, shall:

(1) File FCC Form 331 with the Commission in Washington, DC, 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 the following to the Commission's copy contractor, both in hard copy and on sequential 3.5" DSHD computer diskettes in ASCII for all Appendix D data and in a format to be specified by the Commission by public notice for all other submissions.

(i) Duplicates of the Form 331 filed with the Commission; 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" as amended; 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) \* \* \*

(2) \* \* \*

(iii) The combined signals of all simultaneously operating ITFS response stations within all response service areas and oriented to transmit towards their respective response station hubs and all cochannel ITFS 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 § 74.903(a)(6)(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 ITFS response stations within all response service areas and oriented to transmit towards their respective response station hubs, and all cochannel ITFS 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 § 74.903(a)(6)(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) of this chapter or 74.985(f) 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 or applicant for such cochannel station or hub consents to the application; and

(v) The combined signals of all simultaneously operating ITFS response stations within all response service areas and oriented to transmit towards their respective response station hubs, and all cochannel ITFS 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 § 74.903(a)(6)(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

\* \* \* \* \*

(f) \* \* \* Except as provided in § 74.911(e), 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 § 74.912, or the Commission notifies the applicant that its application will not be granted. \* \* \*

(g) \* \* \*

(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 dBW + 10 log(X/6) dBW, where X is the channel width in MHz; and

\* \* \* \* \*

(6) \* \* \*

(i) First notifies the Commission, in a format to be specified by public notice, 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) of this section is complete and accurate; and

(ii) Provides the Commission's copy contractor with a set of sequential 3.5" DSHD diskettes in ASCII format which update the previously filed response station data (see § 21.909(c)(2)(ii) of this chapter) and with an analysis, in a format to be specified by public notice, 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 of this chapter or § 74.949; or that the applicant for or licensee of such facility has consented to such interference; 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 overload interference 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) \* \* \*

(2) Commencing upon the filing of an application for an ITFS 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 on FCC Form 330A, the ITFS station whose channels are being utilized shall be entitled both to interference protection pursuant to §§ 21.902(i) and 21.938(b)(3) of this chapter and 74.903, 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 ITFS stations and/or ITFS booster stations, upon the submission of a certification of completion of construction of an ITFS response station hub on FCC Form 330A where the channels of an ITFS station are being utilized as response station transmit frequencies, the ITFS station whose channels are being utilized for response station transmissions shall no longer be entitled to interference protection pursuant to §§ 21.902(i) and

21.938(b)(3) of this chapter and 74.903 within the response service area with regard to any portion of any 6 MHz channel employed solely for response station communications. Upon the submission of a certification of completion of construction of an ITFS response station hub on FCC Form 330A where the channels of an ITFS 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 ITFS station whose channels are being utilized shall be entitled both to interference protection pursuant to §§ 21.902(i) and 21.938(b)(3) of this chapter and 74.903, and to protection of the response station hub pursuant to the preceding provisions of this paragraph.

\* \* \* \* \*

(l) \* \* \*

(1) \* \* \* The application shall specify which of the associated I channels is/are intended for point-to-multipoint transmissions, or whether an I channels station already authorized for point-to-multipoint transmissions is being modified. \* \* \*

(2) Submit to the Commission's copy contractor, both in hard copy, and on a 3.5" DSHD computer diskette in ASCII, and likewise submit to the Commission, only upon Commission staff request:

\* \* \* \* \*

(6) A certification that copies of the materials set forth in paragraph (l)(2) 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 (l)(3) of this section, and upon any affected holder of a Basic Trading Area or Partitioned Service Area authorization pursuant to paragraph (l)(2) of this section.

(m) 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.

\* \* \* \* \*

(o) An ITFS response station shall be operated only when engaged in communications with its associated ITFS response station hub or ITFS 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 ITFS 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 ITFS station or booster station. Radiation of an unmodulated carrier and other unnecessary transmissions are forbidden.

(p) 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. 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 values should be adjusted up (channel >6 MHz) or down (channel <6 MHz) by  $10 \log(X/6)$  dBW, where X is the channel width 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 hub station license, the hub licensee must notify the licensee of the ITFS receive site at least one business day prior to the activation of these response stations. The notification must contain, for each response station to be activated, the following information: name and telephone number of a contact person who will be responsible for coordinating the resolution of any interference problems; street address; geographic coordinates to the nearest second; channels/subchannels (transmit only); and transmit antenna pattern, EIRP, orientation and height AMSL. (If transmit antenna pattern, EIRP, orientation or height AMSL are not known with specificity at the time of notification, the hub licensee may, instead, specify the worst-case values for the class of response station being activated.) Such notice to the ITFS licensee shall be given in writing by certified mail unless the ITFS licensee has requested delivery by email 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) to 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.

(q) 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" as amended \* \* \*

30. Section 74.949 is amended by revising paragraphs (a), (b) introductory text, and by adding (b)(5) to read as follows:

**§ 74.949 Individually licensed 125 kHz channel ITFS response stations.**

(a) The provisions of § 74.939(a), (e), (h), (j), (k), (n) and (o) shall also apply with respect to the authorization of 125 kHz channel ITFS response stations not authorized under a response station hub

license. The applicant shall also comply with the requirements of § 74.903 and § 21.938 of this chapter where appropriate, as well as with the provisions of §§ 21.909 and 21.913 of this chapter and of §§ 74.939 and 74.985 regarding the protection of response station hubs and booster (and primary) service areas from harmful electromagnetic interference, using the appropriately adjusted interference protection values based upon the ratios of the bandwidths involved.

(b) An application for a license to operate a new or modified 125 kHz channel ITFS response station not under a response station hub license shall be filed with the Commission in Washington, D.C., on FCC Form 331. The applicant shall supply the following information and certification on that form for each response station:

\* \* \* \* \*

(5) A certification that all licensees and applicants appropriately covered under the provisions of paragraph (a) of this section have been served with copies of the application.

\* \* \* \* \*

31. Section 74.951 is amended by revising paragraph (b) to read as follows:

**§ 74.951 Modification of transmission systems.**

\* \* \* \* \*

(b) Any change in the antenna system affecting the direction of radiation, directive radiation pattern, antenna gain, or radiated power; provided, however, that a licensee may install a sectorized antenna system without prior consent if such system does not change polarization or result in an increase in radiated power by more than one dB in any direction, and notice of such installation is provided to the Commission and the Commission's copy contractor on FCC Form 331 within ten (10) days of installation. When an applicant proposes to employ a directional antenna, or a licensee notifies the Commission pursuant to this paragraph 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).

\* \* \* \* \*

32. Section 74.961 is amended by revising paragraph (a) to read as follows:

**§ 74.961 Frequency tolerance**

(a) Beginning January 21, 2000, equipment authorized to be used at all ITFS main stations, and at all ITFS booster stations authorized pursuant to

§ 74.985(b), shall maintain a frequency tolerance of 0.001%. ITFS booster stations authorized pursuant to § 74.985(e) and ITFS response stations authorized pursuant to § 74.939 shall employ transmitters with sufficient frequency stability to ensure that the emission is, at all times, within the required emission mask. A transmitter licensed prior to November 1, 1991 that remains at the station site for which it was initially authorized and does not comply with the provisions of this paragraph may continue to be used if it does not cause harmful interference to the operations of any other licensee. Any non-conforming transmitter replaced after November 1, 1991 must be replaced by a transmitter meeting the requirements of this paragraph.

\* \* \* \* \*

33. Section 74.985 is amended by:

- (1) removing paragraph (e)(4);
- (2) redesignating paragraph (e)(5) as (e)(4);
- (3) revising paragraph (a);
- (4) revising paragraphs (b) introductory text (b)(4), (b)(5);
- (5) revising the second sentence of paragraph (d);
- (6) revising paragraph (e) introductory text, newly redesignated paragraphs (e)(4)(i), (e)(4)(vi);
- (7) revising paragraph (f); and
- (8) revising paragraph (h).

The additions, removals and revisions are set out as follows:

**§ 74.985 Signal booster stations.**

(a) An ITFS booster station may reuse channels to repeat the signals of ITFS stations or to originate signals on ITFS channels. The aggregate power flux density generated by an ITFS station and all associated signal booster stations and all simultaneously operating cochannel response stations licensed to or applied for by the applicant 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 § 74.903(a)(6)(i)) at or beyond the boundary of the protected service area, as defined by § 21.902(d) of this chapter, of the main ITFS station whose channels are being reused, as measured at locations for which there is an unobstructed signal path, unless the consent of the 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 of this chapter. The applicant for a high-power station, or for

modification thereto, shall file FCC Form 331 with the Commission in Washington, DC, 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 ITFS 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 (and to the Commission upon staff request), both in hard copy, and on sequential 3.5" DSHD computer diskettes in a form to be specified by the Commission by public notice, duplicates of the Form 331 filed with Mellon Bank, and the following information:

\* \* \* \* \*

(4) A study which demonstrates that the aggregate power flux density of the ITFS station and all associated booster stations and simultaneously operating cochannel response stations licensed to or applied for by the applicant does not exceed  $-73 \text{ dBW/m}^2$  (or the appropriately adjusted value based on the actual bandwidth used if other than 6 MHz, see § 74.903(a)(6)(i)) at or beyond the boundary of the protected service area of the main ITFS station whose channels are to be reused, as measured at locations for which there is an unobstructed signal path, unless the consent of affected licensees has been obtained; and

(5) In lieu of the requirements of § 74.903, a study which demonstrates that the proposed signal booster station will cause no harmful interference (as defined in § 74.903(a)(1) and (2)) 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) of this chapter, to any authorized or previously-proposed response station hubs, booster service areas, 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 ITFS signal booster station may be submitted; and

\* \* \* \* \*

(d) \* \* \* Except as provided in § 74.911(e), an application for a high-power ITFS 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 § 74.912, or the Commission notifies the applicant that its application will not be granted. \* \* \*

(e) Eligibility for a license for a low power signal booster station that has a maximum EIRP of  $-9\text{ dBW} + 10\log(X/6)\text{ dBW}$ , where X is the channel width in MHz, shall be restricted to a licensee or conditional licensee. A low-power ITFS signal booster station may operate only on one or more ITFS channels that are licensed to the licensee of the ITFS booster station, but may be operated by a third party with a fully-executed lease or consent agreement with the ITFS conditional licensee or licensee. An ITFS licensee or conditional licensee may install and commence operation of a low-power ITFS signal booster station for the purpose of retransmitting the signals of the ITFS 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 ITFS signal booster station. An ITFS licensee or conditional licensee seeking to install a low-power ITFS 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 (and to the Commission upon staff request), both in hard copy, and on sequential 3.5" DSHD computer diskettes in a format to be specified by public notice, 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):

\* \* \* \* \*

(4) \* \* \*  
(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

\* \* \* \* \*

(vi) The aggregate power flux density of the ITFS station and all associated booster stations and simultaneously operating cochannel response stations licensed to or applied for by the applicant does not exceed  $-73\text{ dBW/m}^2$  (or the appropriately adjusted value based on the actual bandwidth used if other than 6 MHz, see § 74.903(a)(6)(i)) at or beyond the boundary of the protected service area of the main ITFS station whose channels are to be reused, as measured at locations for which there is an unobstructed signal path, unless the consent of affected licensees has been obtained; and

(f) Commencing upon the filing of an application for a high-power ITFS 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 on FCC Form 330A is submitted, an applicant for any new or modified MDS or ITFS station (including any response station hub, high-power booster station, or I channels station) shall demonstrate compliance with the interference protection requirements set forth in §§ 21.902(i) and 21.938(b)(3) of this chapter or § 74.903 with respect to any previously-proposed or authorized booster service area both using the transmission parameters of the high-power ITFS signal booster station (e.g., EIRP, polarization(s) and antenna height) and the transmission parameters of the ITFS station whose channels are to be reused by the high-power ITFS signal booster station. Upon the submission of a certification of completion of construction on FCC Form 330A of an ITFS booster station applied for pursuant to paragraph (b) of this section, or upon the submission of an ITFS booster station notification pursuant to paragraph (e) of this section, the ITFS station whose channels are being reused by the ITFS signal booster shall no longer be entitled to interference protection pursuant to §§ 21.902(i) and 21.938(b)(3) of this chapter and § 74.903 within the booster service area based on the transmission parameters of the ITFS 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.

\* \* \* \* \*

(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 overload interference at an MDS or ITFS receive site, such licensees shall cooperate in good faith to remedy promptly the interference.

34. The alphabetical index to part 74 is amended by adding under the heading "ITFS" a "Response stations hub" heading and adding "Response station hubs (ITFS; individually licensed)" heading, to read as follows:

Alphabetical Index—Part 74				
* * * * *				
ITFS—				
* * * * *				
Response station hubs .....				74.939
* * * * *				
Response stations (ITFS; individually licensed) .....				74.949
* * * * *				

**PART 101—FIXED MICROWAVE SERVICES**

35. The authority for part 101 continues to read as follows:

**Authority:** 47 U.S.C. 154, 303, 309 and 554.

**§ 101.149 [Amended]**

36. Section 101.147 is amended by removing the number (22) from the entries 2,150–2,160 MHz (20) (22) and 2,650–2,690 MHz (22) from the frequency assignments in paragraph (a).  
[FR Doc. 99–29785 Filed 11–19–99; 8:45 am]

BILLING CODE 6712–01–P

**FEDERAL COMMUNICATIONS COMMISSION****47 CFR Part 73**

[DA 99–2476; MM Docket No. 92–81; RM 7875]

**Radio Broadcasting Services; Farmington and Gallup, NM**

**AGENCY:** Federal Communications Commission.

**ACTION:** Final rule; petition for reconsideration.

**SUMMARY:** This document denies the petition for reconsideration filed by KOB-TV, Inc. against our action in the *Report and Order*, 61 FR 08000 (1996) which reallocated Channel 3 from Gallup to Farmington and modified the construction permit for Station KOAV-TV to specify Farmington as its community of license.

**FOR FURTHER INFORMATION CONTACT:** Arthur D. Scrutchins, Mass Media Bureau, (202) 418–2180.

**SUPPLEMENTARY INFORMATION:** This is a synopsis of the Commission's Memorandum Opinion and Order, MM Docket 92–81, adopted October 27, 1999 and released November 5, 1999. The full text of this Commission decision is available for inspection and copying during normal business hours in the FCC Reference Center (Room CY–A257) at its headquarters, 445 12th Street, SW Washington, DC. The complete text of this decision may also be purchased from the Commission's copy contractors, International Transcription Service, Inc., (202) 857–3800, 1231 20th Street, NW, Washington, DC 20036.

**List of Subjects in 47 CFR Part 73.**

Radio broadcasting.

Federal Communications Commission.

**John A. Karousos,**

*Chief, Allocations Branch, Mass Media Bureau.*

[FR Doc. 99–30173 Filed 11–19–99; 8:45 am]

BILLING CODE 6712–01–U

**FEDERAL COMMUNICATIONS COMMISSION****47 CFR Part 73**

[DA No. 99–2452; MM Docket No. 98–196; RM–9325 & RM–9476]

**Radio Broadcasting Services; Whitewright and Van Alstyne, TX**

**AGENCY:** Federal Communications Commission.

**ACTION:** Final rule.

**SUMMARY:** In response to a Petition for Rule Making filed by Chinquapin Creek Broadcasting Company, a Notice of Proposed Rule Making was issued proposing the allotment of Channel 260A at Whitewright, Texas. See 63 FR 67036, December 4, 1998. In response to a counterproposal filed by Chinquapin Creek Broadcasting this document allots Channel 260A to Van Alstyne, Texas, at coordinates 33–27–08 and 96–27–21. With this action, this proceeding is terminated. A filing window for Channel 260A at Van Alstyne, Texas, will not be opened at this time. Instead, the issue of opening a filing window for this channel will be addressed by the Commission in a subsequent order.

**DATES:** Effective December 20, 1999.

**FOR FURTHER INFORMATION CONTACT:** Kathleen Scheuerle, Mass Media Bureau, (202) 418–2180.

**SUPPLEMENTARY INFORMATION:** This is a summary of the Commission's Report and Order, MM Docket No. 98–196, adopted October 27, 1999, and released November 5, 1999. The full text of this Commission decision is available for inspection and copying during normal business hours in the Commission's Reference Center, 445 12th Street, SW, Washington, DC. The complete text of this decision may also be purchased from the Commission's copy contractors, International Transcription Services, Inc., 1231 20th Street, NW., Washington, DC. 20036, (202) 857–3800, facsimile (202) 857–3805.

**List of Subjects in 47 CFR Part 73**

Radio broadcasting.

Part 73 of title 47 of the Code of Federal Regulations is amended as follows:

**PART 73—[AMENDED]**

1. The authority citation for Part 73 continues to read as follows:

**Authority:** 47 U.S.C. 154, 303, 334 and 336.

**§ 73.202 [Amended]**

2. Section 73.202(b), the Table of FM Allotments under Texas is amended by adding Van Alstyne, Channel 260A.

Federal Communications Commission.

**John A. Karousos,**

*Chief, Allocations Branch, Policy and Rules Division, Mass Media Bureau.*

[FR Doc. 99–30169 Filed 11–19–99; 8:45 am]

BILLING CODE 6712–01–P

**DEPARTMENT OF THE INTERIOR****Fish and Wildlife Service****50 CFR Part 17**

RIN 1018–AE54

**Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for the Plant *Lesquerella thamnophila* (Zapata Bladderpod)**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Final rule.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), determine the plant *Lesquerella thamnophila* (Zapata bladderpod) to be an endangered species under the authority of the Endangered Species Act (Act) of 1973, as amended. *Lesquerella thamnophila* is currently known from four locations in Starr and Zapata Counties, Texas. Increased urban development, roadway construction, invasion of exotic species, increased oil and gas activities, alteration and conversion of native plant communities to improved pastures, overgrazing, and vulnerability from low population numbers threaten this species.

**EFFECTIVE DATE:** This final rule is effective December 22, 1999.

**ADDRESSES:** The complete file for this rule is available for inspection, by appointment, during normal business hours (8:00 am to 4:30 pm, Monday through Friday), at the U.S. Fish and Wildlife Service, Ecological Services Field Office, c/o Texas A&M University-Corpus Christi, Campus Box 338, 6300 Ocean Drive, Corpus Christi, Texas 78412.

**FOR FURTHER INFORMATION CONTACT:** Field Supervisor of the Corpus Christi Ecological Services Field Office at the