APPENDICES

APPENDIX A - List of Commenters to the *TIA Petition*

Comments
AirTouch Communications, Inc.
Alcatel USA, Inc. (Alcatel)
Andrew Corporation
Digital Microwave Corporation
Harris Corporation
Society of Broadcast Engineers, Inc.
Teledesic LLC

Reply Comments
Alcatel
Telecommunications Industry Association

APPENDIX B - Regulatory Flexibility Analysis

I. Final Regulatory Flexibility Analysis (for *Memorandum Opinion and Order*)

As required by Section 603 of the Regulatory Flexibility Act, 5 U.S.C. § 603 (RFA), an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the *Part 101 Notice* and the *Point-to-Point Notice* in WT Docket No. 94-148 and CC Docket No. 93-2, respectively.[1] The Commission sought written public comments on the proposals in these proceedings, including on the IRFAs. The Commission's Final Regulatory Flexibility Analysis (FRFA) for the *Memorandum Opinion and Order* (*MO&O*) conforms to the RFA.

Need for and purpose of this action. This *MO&O* addresses petitions for reconsideration and clarification received in response to the *Part 101 Order* and further simplifies and corrects the rules in the Commission's newly consolidated Part 101 of its Rules, which governs the common carrier and private operational fixed microwave services. The changes made by the *MO&O* are minor in nature and are intended to forestall confusion, eliminate redundancy, remove obsolete language, and generally promote the public interest. We find that the potential benefits to fixed microwave applicants and licensees exceed any negative effects that could result from the revised rules promulgated herein. Thus, we conclude that the public interest is served by modifying these rules, thereby increasing the speed and ease of filing and processing applications for the fixed microwave services.

Summary of significant issues raised by public comments in response to the IRFA. No comments were submitted in direct response to the IRFA. Several petitioners suggested modifications to the rules adopted in the *Part 101 Order*. As a result of these petitions, the Commission has made appropriate modifications to the Rules. The specific suggestions and modifications are discussed in the paragraphs above. We have reviewed the petitions and general comments to determine any impact they may have on small businesses.

Description and estimate of the number of small entities to which the rules apply. The rules will affect all common carrier and private operational fixed microwave licensees who are authorized under Part 101 of the Commission's Rules. The Commission has not developed a definition of small entities applicable to these licensees. Therefore, the applicable definition of small entity is the definition under the Small Business Administration (SBA) rules for the radiotelephone industry, which provides that a small entity is a radiotelephone company employing fewer than 1,500 persons.[2] The 1992 Census of Transportation, Communications, and Utilities, conducted by the Bureau of the Census, which is the most recent information available, shows that only 12 radiotelephone firms out of a total of 1,178 such firms which operated during 1992 had 1,000 or more employees.[3] It is our understanding that these rule

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[1] *See Part 101 Notice*, 10 FCC Rcd at 2516; *Point-to-Point Notice*, 8 FCC Rcd at 1115.

[2] 13 C.F.R. § 121.201, Standard Industrial Classification (SIC) Code 4812.

[3] U.S. Bureau of the Census, U.S. Department of Commerce, 1992 Census of Transportation, Communica-

change will affect less than 1000 entities, but that the effect will be to lessen time and input and thereby any costs associated with processing the applications.

Description of projected reporting, recordkeeping, and other compliance requirements. There are no new reporting or recordkeeping requirements proposed or adopted in this *MO&O*. We have amended the fixed microwave rules to make them less burdensome, eliminated some requirements for filing applications, consolidated application forms, and clarified some of the language of the existing rules. Licensees, when making changes to their radio systems or constructing new facilities, were previously required to file an application or notify the Commission by letter of the change or the completion of construction. We have eliminated this requirement in many cases.

Significant alternatives considered. The petitions for reconsideration and clarification offered various alternatives for modification of the rules adopted in the *Part 101 Notice;* an additional alternative was to maintain the *status quo*. In general, the petitions for reconsideration and clarification supported the rule changes already effected, but sought changes asserted to make the adopted rules more clear and accurate. Many of the suggested modifications are incorporated in the final rules. The rules, as amended herein, impose no additional regulatory burdens. The Commission will continue to examine alternatives in the future with the objective of eliminating unnecessary regulations and minimizing economic impact on small business entities.

Commission's outreach efforts to learn of and respond to the views of small entities pursuant to 5 U.S.C. § 609. In this proceeding, the Commission has taken several steps to learn and respond to the views of small entities. Throughout the course of this proceeding, representatives of the Public Safety and Private Wireless Division (PS&PWD) of the Wireless Telecommunications Bureau have had numerous discussions with the representatives of small entities. The staff of the Licensing and Data Analysis Branch of the PS&PWD in Gettysburg, Pennsylvania routinely respond to questions posed by the representatives of small entities and, when appropriate, refer issues arising from those questions to PS&PWD staff in Washington, D.C. for determination of whether a rule change or clarification will benefit the small entities posing the questions. Additional outreach has been achieved by the staff of the PS&PWD meeting with the frequency coordinators for the microwave services.[4]

Report to Congress. The Commission shall send a copy of this Final Regulatory Flexibility Analysis, along with the *Memorandum Opinion and Order*, in a report to Congress pursuant to Section 251 of the Small Business Regulatory Enforcement Fairness Act of 1996, 5 U.S.C. § 801(a)(1)(A). A copy of this FRFA will also be published in the Federal Register.

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tions, and Utilities, UC92-S-1, Subject Series, Establishment and Firm Size, Table 5, Employment Size of Firms: 1992, SIC Code 4812 (issued May 1995).

[4] Many of the frequency coordinators are employees of trade associations, which have many small entities as members. The last major frequency coordination conference held in Washington, D.C. was in May 1999; PS&PWD staff were in attendance.

II. Initial Regulatory Flexibility Analysis (for *Notice of Proposed Rule Making*)

As required by Section 603 of the Regulatory Flexibility Act, the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) of the expected impact on small entities of the policies and rules proposed in this *Notice of Proposed Rule Making* (*Notice*). Written public comments are requested on the IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the *Notice*.

Need for and objectives of the proposed rules. This rulemaking is being initiated to apply certain licensing and service rules to new and existing fixed microwave licensees under Part 101 of the Commission's Rules for the purpose of streamlining application preparation and processing time for the Commission and the industry. Our objectives are (1) to clarify the existing rules so they are easier to understand; (2) to facilitate the awarding of licenses to entities in a quicker manner; and (3) to eliminate unnecessary regulation.

Legal basis. The proposed action is authorized under the Administrative Procedure Act, 5 U.S.C. § 553; and sections 1, 4(i), 7, 301, 303, 308, and 309(j) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i), 157, 301, 303, 308, and 309(j).

Description and estimate of the number of small entities to which the proposed rules will apply. The proposed rules would affect all common carrier and private operational fixed microwave licensees who are authorized under Part 101 of the Commission's Rules. The Commission has not developed a definition of small entities applicable to these licensees. Therefore, the applicable definition of small entity is the definition under the Small Business Administration (SBA) rules for the radiotelephone industry, which provides that a small entity is a radiotelephone company employing fewer than 1,500 persons.[5] The 1992 Census of Transportation, Communications, and Utilities, conducted by the Bureau of the Census, which is the most recent information available, shows that only 12 radiotelephone firms out of a total of 1,178 such firms which operated during 1992 had 1,000 or more employees.[6] It is our understanding that these rule change will affect less than 1000 entities, but that the effect will be to lessen time and input and thereby any costs associated with processing the applications. We seek comment on this analysis. In providing such comment, commenters are requested to provide information regarding how many total and small business entities would be affected.

Description of projected reporting, recordkeeping, and other compliance requirements. Under the proposals contained in the *Notice*, we are not changing or are reducing the amount of

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[5] 13 C.F.R. § 121.201, Standard Industrial Classification (SIC) Code 4812.

[6] U.S. Bureau of the Census, U.S. Department of Commerce, 1992 Census of Transportation, Communications, and Utilities, UC92-S-1, Subject Series, Establishment and Firm Size, Table 5, Employment Size of Firms: 1992, SIC Code 4812 (issued May 1995).

reporting, recordkeeping, and other compliance requirements. Applicants for licenses will be required to submit applications on FCC Form 601 to the Wireless Telecommunications Bureau as they do now. We request comment on how these requirements can be modified to reduce the burden on small entities and still meet the objectives of the proceeding.

Significant alternatives minimizing the impact on small entities consistent with the stated objectives. We have reduced burdens wherever possible. The regulatory burdens we have retained, such as filing applications on appropriate forms, are necessary in order to ensure that the public receives the benefits of new and existing services in a prompt and efficient manner. We will continue to examine alternatives in the future with the objectives of eliminating unnecessary regulations and minimizing and significant economic impact on small entities. We seek comment on significant alternatives commenters believe we should adopt.

Federal rules that overlap, duplicate, or conflict with these proposed rules. None.

APPENDIX C - Final Rules

Parts 24, 25, 74, 78, 90, and 101 of Chapter I of Title 47 of the Code of Federal Regulations are amended as follows:

I. PART 24 - PERSONAL COMMUNICATIONS SERVICES

1. The authority citation for Part 24 continues to read as follows:

AUTHORITY: 47 U.S.C. 154, 301, 302, 303, 309 and 332.

2. Section 24.2 is amended by revising paragraphs (h) and (j) to read as follows:

§ 24.2 Other applicable rule parts.

* * * * *

(h) *Part 21.* This part contains rules concerning point-to-multipoint microwave multipoint distribution systems.

* * * * *

(j) *Part 101.* This part contains rules concerning common carrier and private services relating to fixed point-to-point and point-to-multipoint microwave systems.

II. PART 25 - SATELLITE COMMUNICATIONS

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

AUTHORITY: 47 U.S.C. 701-704. Interprets or applies sec. 303, 47 U.S.C. 303. 47 U.S.C. 154, 301, 302, 303, 307, 309 and 332, unless otherwise noted.

4. Section 25.203 is amended by revising paragraph (c)(3) to read as follows:

§ 25.203 Choice of sites and frequencies.

* * * * *

(c) * * * * *

(3) The coordination procedure specified in § 101.103(d) of this chapter shall be applicable except that the information to be provided shall be that set forth in paragraph (c)(2) of this section, and that the 30-day period allowed for response to a request for coordination may be increased to a maximum of 45 days by mutual consent of the parties.

* * * * *

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

5. The authority citation for Part 74 continues to read as follows:

AUTHORITY: Secs. 4, 303, 48 Stat. 1066, as amended, 1082, as amended; 47 U.S.C. 154, 303, 554.

6. Section 74.502 is amended by revising paragraph (a), the introductory text of paragraph (c), and the last sentence of paragraph (c)(1) to read as follows:

§ 74.502 Frequency assignment.

(a) Except as provided in US 302, broadcast auxiliary stations licensed as of November 21, 1984, to operate in the band 942-944 MHz[1] may continue to operate on a co-equal primary basis to other stations and services operating in the band in accordance with the Table of Frequency Allocations. These stations will be protected from possible interference caused by new users of the band by the technical standards specified in §101.105(c)(2).

[1] NOTE: In addition to this band, stations in Puerto Rico may continue to be authorized on 942.5, 943.0, 943.5, 944.0 MHz in the band 942-944 MHz on a primary basis to stations and services operating in accordance with the Table of Frequency Allocations.

* * * * *

(c) The frequency bands 18,760-18,820 MHz and 19,100-19,160 MHz are available for assignment to aural broadcast STL and intercity relay stations and are shared on a co-primary basis with other fixed services under Parts 78 and 101 of the Commission's rules.

(1) * * * Applicants may use either a two-way link or one frequency of a frequency pair for a one-way link and shall coordinate proposed operations pursuant to the procedures required in §101.103(d).

* * * * *

7. Section 74.602 is amended by revising paragraphs (e) and (g) introductory text to read as follows:

§ 74.602 Frequency assignment.

* * * * *

(e) Communication common carriers in the Local Television Transmission Service (Part 101) may be assigned frequencies available to television broadcast station licensees and broadcast network entities for the purpose of providing service to television broadcast stations and broadcast network entities, respectively.

* * * * *

(g) The following frequencies are available for assignment to television STL, television relay stations and television translator relay stations. The provisions of §74.604 do not apply to the use of these frequencies. These frequencies are shared on a co-primary basis with other stations in the fixed service (see Parts 78 and 101). Applicants may use either a two-way link or one or both frequencies of a frequency pair for a one-way link and shall coordinate proposed operations pursuant to procedures required in §101.103(d).

* * * * *

8. Section 74.638 is amended by revising the first sentence of paragraph (a) introductory text, and paragraph (b) to read as follows:

§ 74.638 Frequency coordination.

(a) Channels in Band D are shared with certain Private Operational Fixed Stations authorized under part 101, §101.147(p), after September 9, 1983. * * *

* * * * *

(b) Coordination of assignments in the 6425-6525 MHz and 17.7-19.7 GHz bands will be in accordance with the procedure established in §101.103(d), *except* that the prior coordination process for mobile (temporary fixed) assignments may be completed orally and the period allowed for response to a coordination notification may be less than 30 days if the parties agree.

IV. PART 78 - CABLE TELEVISION RELAY SERVICE

9. The authority citation for Part 78 continues to read as follows:

AUTHORITY: Secs. 2, 3, 4, 301, 303, 307, 308, 309, 48 Stat., as amended, 1064, 1065, 1066, 1081, 1082, 1083, 1084, 1085; 47 U.S.C. 152, 153, 154, 301, 303, 307, 308, 309.

10. Section 78.3 is revised to read as follows:

§ 78.3 Other pertinent rules.

Other pertinent provisions of the Commission's rules and regulation relating to the cable

television relay service (CARS) are included in the following parts of this chapter:

Part 0-Commission Organization.
Part 1-Practice and Procedure.
Part 2-Frequency Allocations and Radio Treaty Matters; General Rules and Regulations.
Part 17-Construction, Marking, and Lighting of Antenna Structures.
Part 21-Domestic Public Fixed Radio Services.
Part 74-Experimental Radio, Auxiliary, Special Broadcast and Other Program Distributional Services.
Part 76-Cable Television Service
Part 101-Fixed Microwave Services.

11. Section 78.11 is amended by revising paragraph (g) to read as follows:

§ 78.11 Permissible service.

* * * * *

(g) The provisions of paragraph (d) of this section and §78.13 of this part shall not apply to a licensee who has been licensed in the CARS service pursuant to §101.705 of this chapter, except that paragraph (d) of this section shall apply with respect to facilities added or cable television and other eligible systems first served after February 1, 1966.

* * * * *

12. Section 78.18 is amended by revising the introductory texts of paragraphs (a)(4), (5), (6), (7), and (8) to read as follows:

§ 78.18 Frequency assignments.

(a) * * *

* * * * *

(4) The Cable Television Relay Service is also assigned the following frequencies in the 17,700 to 19,700 MHz band. These frequencies are co-equally shared with stations in the fixed service under Parts 74 and 101 of the Commission's Rules. Applicants may use either two-way link or one or both frequencies of a frequency pair for a one-way link and shall coordinate proposed operations pursuant to procedures required in §101.103(d). These bands may be used for analog or digital modulation. * * *

(5) *31.0 to 31.3 GHz.* These frequencies are shared on a co-equal basis with other stations in the fixed and mobile services (see Parts 74, 95 and 101). No interference protection is afforded to fixed or mobile stations operating this band. * * *

(6) *6425 to 6525 MHz-Mobile only.* Paired and unpaired operations permitted. Use of this

spectrum for direct delivery of video programs to the general public or multi-channel cable distribution is not permitted. This band is co-equally shared with mobile stations licensed pursuant to Parts 74 and 101 of the Commission's Rules. The following channel plans apply. * * *

(7) *1990-2110 MHz-Mobile only.* Use of this spectrum for direct delivery of video programs to the general public or multi-channel cable distribution is not permitted. This band is co-equally shared with stations licensed pursuant to Parts 74 and 101 of the Commission's Rules. (Common carriers may use this band pursuant to provisions of §101.803(b)). The following channeling plan applies subject to the provisions of §74.604. * * *

(8) *6875-7125 MHz-Mobile only.* Use of this spectrum for direct delivery of video programs to the general public or multi-channel cable distribution is not permitted. This band is co-equally shared with stations licensed pursuant to Parts 74 and 101 of the Commission's Rules. (Common carriers may use this band pursuant to provisions of §101.803(b)). The following channeling plan applies subject to the provisions of §74.604. * * *

* * * * *

13. Section 78.36 is amended by revising paragraph (b) to read as follows:

§ 78.36 Frequency coordination.

* * * * *

(b) *6425-6525 MHz and 17.7-19.7 GHz.* Coordination of fixed and mobile assignments will be in accordance with the procedure established in §101.103(d), *except* that the prior coordination process for mobile (temporary fixed) assignments may be completed orally and the period allowed for response to a coordination notification may be less than 30 days if the parties agree.

V. PART 90 - PRIVATE LAND MOBILE RADIO SERVICES

14. The authority citation for Part 90 continues to read as follows:

AUTHORITY: Secs. 4, 251-2, 303, 309, and 332, as amended; 47 U.S.C. 154, 251-2, 303, 309 and 332, unless otherwise noted.

15. Section 90.20 is amended by revising paragraph (d)(70) to read as follows:

§90.20 Public Safety Pool.

* * * * *

(d) * * * * *

(70) Assignment of frequencies above 928 MHz for operational-fixed stations is governed by Part 101 of this chapter.

* * * * *

VI. PART 101 - FIXED MICROWAVE SERVICES

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

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

17. Section 101.3 is amended by revising the definition of "Private line service" to read as follows:

§101.3 Definitions.

* * * * *

Private operational fixed point-to-point microwave service. A private radio service rendered by fixed and temporary fixed stations on microwave frequencies for the exclusive use or availability for use of the licensee or other eligible entities for communication between two or more designated points. Service may be provided between points within the United States, points within United States' possessions, or between the United States and points in Canada or Mexico.

* * * * *

18. Section 101.4 is amended by revising paragraph (a) to read as follows:

§101.4 Transition plan.

(a) All systems subject to Parts 21 and 94 of this chapter in effect as of July 31, 1996, which are licensed or which are proposed in an application on file, as of July 31, 1996, are subject to the requirements under Part 21 or Part 94 of this chapter as contained in the C.F.R. edition revised as of October 1, 1995 and amended in the FEDERAL REGISTER through July 31, 1996, as applicable, indefinitely.

* * * * *

21. Section 101.17 is amended by restoring paragraphs (a) – (b) to read as follows:

§ 101.17 Performance requirements for the 38.6-40.0 GHz frequency band.

(a) All 38.6-40.0 GHz band licensees must demonstrate substantial service at the time of license renewal. A licensee's substantial service showing should include, but not be limited to, the following

information for each channel for which they hold a license, in each EA or portion of an EA covered by their license, in order to qualify for renewal of that license. The information provided will be judged by the Commission to determine whether the licensee is providing service which rises to the level of "substantial."

(1) A description of the 38.6-40.0 GHz band licensee's current service in terms of geographic coverage;

(2) A description of the 38.6-40.0 GHz band licensee's current service in terms of population served, as well as any additional service provided during the license term;

(3) A description of the 38.6-40.0 GHz band licensee's investments in its system(s) (type of facilities constructed and their operational status is required);

(b) Any 38.6-40.0 GHz band licensees adjudged not to be providing substantial service will not have their licenses renewed.

* * * * *

19. Section 101.21 is amended by revising paragraph (f) to read as follows:

§ 101.21 Technical content of applications.

* * * * *

(f) All applicants for regular authorization must, before filing an application, major amendments to a pending application, or modifications to a license, prior coordinate the proposed frequency usage with existing users in the area and other applicants with previously filed applications in accordance with the procedures in § 101.103. In those frequency bands shared with the communication-satellite service, an applicant for a new station, for new points of communication, for the initial frequency assignment in a shared band for which coordination has not been previously effected, or for authority to modify the emission or radiation characteristics of an existing station in a manner that may increase the likelihood of harmful interference, must ascertain in advance whether the station(s) involved lie within the great circle coordination distance contours of an existing Earth station or one for which an application has been accepted for filing, and must coordinate his proposal with each such Earth station operator or applicant. For each potential interference path, the applicant must perform the computations required to determine that the expected level of interference to or from the terrestrial station does not exceed the maximum permissible interference power level in accordance with the technical standards and requirements of §25.251 of this chapter. The Commission may, in the course of examining any application, require the submission of additional showings, complete with pertinent data and calculations in accordance with part 25 of this chapter, showing that harmful interference will not likely result from the proposed operation. (Technical characteristics of the Earth stations on file and coordination contour maps for those Earth stations will be kept on file for public inspection in the offices of the Commission's International Bureau in Washington, D.C.)

* * * * *

20. Section 101.31 is amended by revising the title of paragraph (a) as follows:

§ 101.31 Temporary and conditional authorizations.

(a) *Operation at temporary locations.*

* * * * *

21. Section 101.55 is amended by revising paragraph (a) introductory text, paragraph (d) introductory text, and the first sentence of paragraph (e)(3) to read as follows:

§ 101.55 Considerations involving transfer or assignment applications.

(a) Except as provided for in paragraph (d) of this section, licenses may not be assigned or transferred prior to the completion of construction of the facility. However, consent to the assignment or transfer of control of such a license may be given prior to the completion of construction where:

* * * * *

(d) If a proposed transfer of radio facilities is incidental to a sale or other facilities or merger of interests, the showing specified under paragraph (c) of this section shall be submitted and include an additional exhibit that:

* * * * *

(e) * * * * *

(3) The median date of the applicable commencement dates (determined pursuant to paragraphs (e)(1) and (2) of this section) if the transaction involves a system (such as a Private Operational Fixed Point-to-Point Microwave system) of two or more stations. * * * * *

22. Section 101.63 is amended by revising paragraph (a) to read as follows:

§ 101.63 Period of construction; certification of completion of construction.

(a) Except for stations licensed in the Local Multipoint Distribution Service (LMDS) and 38.6-40.0 GHz band, each station licensed under this part must be in operation within 18 months from the initial date of grant. Modification of an operational station other than one licensed in LMDS and the 38.6-40.0 GHz band must be completed within 18 months of the date of grant of the applicable modification request.

* * * * *

23. Section 101.81 is amended by revising the introductory paragraph to read as follows:

§101.81 Future licensing in the 1850-1990 MHz, 2110-2150 MHz, and 2160-2200 MHz bands.

After April 25, 1996, all major modifications and extensions to existing FMS systems in the 1850-1990 MHz, 2110-2150 MHz, and 2160-2200 MHz bands will be authorized on a secondary basis to ET systems. All other modifications will render the modified FMS license secondary to ET operations, unless the incumbent affirmatively justifies primary status and the incumbent FMS licensee establishes that the modification would not add to the relocation costs of ET licensees. Incumbent FMS licensees will maintain primary status for the following technical changes:

* * * * *

24. Section 101.101 is amended by correcting the first seven entries and three entries near the end of the table and the list of acronyms after the table to read as follows:

* * * * *

§ 101.101 Frequency availability.

FREQUENCY BAND (MHz)	RADIO SERVICE				
	COMMON CARRIER (Part 101)	PRIVATE RADIO (Part 101)	BROADCAST AUXILIARY (Part 74)	OTHER (Parts 15, 21, 22, 24, 25, 74 78 & 100)	NOTES
928 – 929	MAS	MAS		PRS	
932.0 – 932.5	MAS	MAS		PRS	
932.5 – 935.0	CC	OFS			(1)
941.0 – 941.5	MAS	MAS		PRS	
941.5 – 944.0	CC	OFS	Aural BAS		(1)
952 – 958		OFS/MAS		PRS	
958 – 960	MAS	OFS			
* * *					
27,500-28,350	LMDS	LMDS			

FREQUENCY BAND (MHz)	RADIO SERVICE				
	COMMON CARRIER (Part 101)	PRIVATE RADIO (Part 101)	BROADCAST AUXILIARY (Part 74)	OTHER (Parts 15, 21, 22, 24, 25, 74 78 & 100)	NOTES
29,100-29,250	LMDS	LMDS			
31,000-31,300	CC LMDS LTTS	OFS LMDS			
* * *					

* * *

BAS: Broadcast Auxiliary Service -- (Part 74)
CARS: Cable Television Relay Service --(Part 78)
CC: Common Carrier Fixed Point-to-Point Microwave Service -- (Part 101, Subparts C & I)
DBS: Direct Broadcast Satellite -- (Part 100)
DEMS: Digital Electronic Message Service -- (Part 101, Subpart G)

ISM: Industrial, Scientific & Medical -- (Part 18)
ITFS: Instructional Television Fixed Service -- (Part 74)
LTTS: Local Television Transmission Service -- (Part 101, Subpart J)
MAS: Multiple Address System -- (Part 101)
MDS: Multipoint Distribution Service -- (Part 21)
OFS: Private Operational Fixed Point-to-Point Microwave Service -- (Part 101, Subparts C & H)
PCS: Personal Communications Service -- (Part 24)
PET: Emerging Technologies (per ET Dkt. No. 92-9, not yet assigned)
PRS: Paging and Radiotelephone Service -- (Part 22, Subpart E)
SAT: Fixed Satellite Service -- (Part 25)

Notes:

F - Fixed M - Mobile TF - Temporary Fixed

(1)-Applications for frequencies in the 932.5-935/941.5-944 MHz bands may be filed initially during a one-week period to be announced by public notice. After these applications have been processed, the Commission will announce by public notice a filing date for remaining frequencies. From this filing date forward, applications will be processed on a daily first-come, first-served basis.

* * * * *

25. Section 101.103 is amended by revising paragraphs (d)(2)(i) and (ii) to read as follows:

§101.103 Frequency coordination procedures.

* * * * *

(d) * * * * *

(2) * * * * *

(i) Coordination involves two separate elements: notification and response. Both or either may be oral or in written form. To be acceptable for filing, all applications and major technical amendments must certify that coordination, including response, has been completed. The names of the licensees, permittees and applicants with which coordination was accomplished must be specified. If such notice and/or response is oral, the party providing such notice or response must supply written documentation of the communication upon request;

(ii) Notification must include relevant technical details of the proposal. At minimum, this should include, as applicable, the following:

Applicant's name and address.
Transmitting station name.
Transmitting station coordinates.
Frequencies and polarizations to be added, changed or deleted.
Transmitting equipment type, its stability, actual output power, emission designator, and type of modulation (loading).
Transmitting antenna type(s), model, gain and, if required, a radiation pattern provided or certified by the manufacturer.
Transmitting antenna center line height(s) above ground level and ground elevation above mean sea level.
Receiving station name.
Receiving station coordinates.
Receiving antenna type(s), model, gain, and, if required, a radiation pattern provided or certified by the manufacturer.
Receiving antenna center line height(s) above ground level and ground elevation above mean sea level.
Path azimuth and distance.
Estimated transmitter transmission line loss expressed in dB.
Estimated receiver transmission line loss expressed in dB.
For a system utilizing ATPC, maximum transmit power, coordinated transmit power, and nominal transmit power.

NOTE: The position location of antenna sites shall be determined to an accuracy of no less than ±1 second in the horizontal dimensions (latitude and longitude) and ±1 meter in

the vertical dimension (ground elevation) with respect to the National Spacial Reference System.

* * * * *

26. Section 101.105 is amended by revising the paragraph (c)(2) introductory text and the first sentences of paragraph (c)(3) and (c)(7) to read as follows:

§101.105 Interference protection criteria.

* * * * *

(c) *Applying the criteria.* (1) * * * * *

(2) If TSB 10 guidelines cannot be used, the following interference protection criteria may be used by calculating the ratio in dB between the desired (carrier signal) and the undesired (interfering) signal (C/I ratio) appearing at the input to the receiver under investigation (victim receiver). Except as provided in §101.147 of this Part, where the applicant's proposed facilities are of a type not included in paragraphs (a) and (b) of this section or where the development of the carrier-to-interference (C/I) ratio is not covered by generally acceptable procedures, or where the applicant does not wish to develop the carrier-to-interference ratio, the applicant must, in the absence of criteria or a developed C/I ratio, employ the following C/I protection ratios:

* * * * *

(3) Applicants for frequencies listed in § 101.147(b)(1)-(4) of this part must make the following showings that protection criteria have been met over the entire service area of existing systems. * * *

* * * * *

(7) Each application for new or modified nodal station on channels numbered 21, 22, 23, and 24 in the 10.6 GHz band must include an analysis of the potential for harmful interference to all other licensed and previously applied for co-channel and adjacent channel stations located within 80 kilometers of the location of the proposed station. * * *

* * * * *

30. Section 101.109 is amended by revising the table in paragraph (c) to read as follows:

§101.109 Bandwidth.

* * * * *

(c) * * *

Frequency Band (MHz)	Maximum Authorized Bandwidth
928 to 929	25 kHz /1/ /5/ /6/
932 to 932.5, 941 to 941.5	12.5 kHz /1/ /5/ /6/
932.5 to 935, 941.5 to 944	200 kHz /1/
952 to 960	200 kHz /1/ /5/ /6/
* * *	* * *

/1/ The maximum bandwidth that will be authorized for each particular frequency in this band is detailed in the appropriate frequency table in §101.147.

* * * * *

/4/ For exceptions, see §101.147(s).

/5/ A 12.5 kHz bandwidth applies only to frequencies listed in §101.147(b)(1-4).

/6/ For frequencies listed in §101.147(b)(1-4), consideration will be given on a case-by-case basis to authorizing bandwidths up to 50 kHz.

* * * * *

27. Section 101.113 is amended by revising the table in paragraph (a) to add an entry for 14,200-14,400 MHz, modify the entry for 21,200-23,600 MHz, to change footnote 5, and add footnote 10 to read as follows:

§101.113 Transmitter power limitations.

(a) * * *

Frequency Band (MHz)	Maximum allowable EIRP [1 2]	
	Fixed (dBW)	Mobile (dBW)
* * *	* * *	* * *
14,200 to 14,400	+45	. . . .

Frequency Band (MHz)	Maximum allowable EIRP [1 2]	
	Fixed (dBW)	Mobile (dBW)
* * *	* * *	* * *
18,800 to 19,700	[5] +55	
21,200 to 23,600 [10]	+55	. . . .
* * *	* * *	* * *
27,500 to 28,350 [9]	+55	. . . .
* * *	* * *	* * *
31,000 to 31,075 [8, 9]	30 dBW/MHz	30 dBW/MHz
31,075 to 31,225 [8, 9]	30 dBW/MHz	30 dBW/MHz
31,225 to 31,300 [8, 9]	30 dBW/MHz	30 dBW/MHz
* * *	* * *	* * *

* * * * *

[5] The output power of a DEMS System nodal transmitter shall not exceed 0.5 watts per 250 kHz. The output power of a DEMS System user transmitter shall not exceed 0.04 watts per 250 kHz. The transmitter power in terms of the watts specified is the peak envelope power of the emission measured at the associated antenna input port. The operating power shall not exceed the authorized power by more than 10 percent of the authorized power in watts at any time. Frequencies from 10,600-10,680 MHz are subject to footnote US265 in the Table of Frequency Allocations in Section 2.106 of the Commission's Rules..

* * *

[10] See § 101.147(s).

* * * * *

28. Section 101.115 is amended by revising footnote 11 to the table in paragraph (c) removing the "Note to footnote 11" to read as follows:

§101.115 Directional antennas.

* * * * *

(c) * * * * *

11 Except as provided in Section 101.147(s).

12 * * * * *

* * * * *

29. Section 101.135 is amended by revising the first sentence of paragraph (a) to read as follows:

§ 101.135 Shared use of radio stations and the offering of private carrier service.

* * * * *

(a) Persons or governmental entities licensed to operate radio systems on any of the private radio frequencies set out in § 101.101 may share such systems with, or provide private carrier service to, any eligible entity for licensing under this part, regardless of individual eligibility restrictions, provided that the communications being carried are permissible under § 101.603. * * *

* * * * *

30. Section 101.143 is amended by revising paragraph (b) to read as follows:

§101.143 Minimum path length requirements.

* * * * *

(b) For paths shorter than those specified in the Table above, the EIRP shall not exceed the value derived from the following equation:

EIRP = MAXEIRP - 40*log(A/B) dBW

Where:
EIRP = The new maximum EIRP (equivalent isotropically radiated power) in dBW.
MAXEIRP = Maximum EIRP as set forth in the Table in Section 101.113(a).
A = Minimum path length from the Table above for the frequency band in kilometers.
B = The actual path length in kilometers.

NOTE TO PARAGRAPH (b): For transmitters using Automatic Transmitter Power Control, EIRP corresponds to the maximum transmitter power available, not the coordinated transmit power or the nominal transmit power.

* * * * *

31. Section 101.145 is amended by revising paragraph (a) to read as follows:

§101.145 Interference to geostationary-satellites.

* * * * *

(a) Stations authorized prior to July 1, 1976 in the band 2655-2690 MHz, which exceed the power levels in paragraphs (b) and (c) of this section are permitted to operate indefinitely, provided that the operation of such stations does not result in harmful interference to reception in these bands on board geostationary space stations.

* * * * *

32. Section 101.147 is amended by revising specific frequency listing and notes and adding a new note 29 in paragraph (a), revising paragraph (b)(6) TABLE 11, revising the introductory text in paragraph (j), and revising the frequency listings in tables in paragraphs (r)(3),(4), and (5), and (v)(1) and paragraph (v)(2) to read as follows:

§101.147 Frequency assignments.

(a) Frequencies in the following bands are available for assignment for fixed microwave services.

* * *
2,110-2130 MHz (1) (3) (7) (20) (23)
* * *
2,150-2160 MHz (22) (29)
2,160-2180 MHz (1) (2) (20) (23)
* * *
2450-2500 MHz (4)
* * *
12,200-12,700 MHz (22)
12,700-13,200 MHz (22)
* * *

(20) New facilities in these bands will be licensed only on a secondary basis. Facilities licensed or applied for before January 16, 1992, are permitted to make minor modifications in accordance with § 101.81 and retain their primary status.

***

(22) Frequencies in these bands are for the exclusive use of Private Operational Fixed Point-to-Point Microwave Service (part 101). Frequencies in the 12,700-13,200 MHz band, which were available

only to stations authorized in the 12,200-12,700 MHz band as of September 9, 1983, are not available for new facilities.

***

(29) Frequencies in this band are shared with stations in the Multipoint Distribution Service (Part 21). These frequencies may be used for the transmission of the licensee's products and information services, excluding video entertainment material to the licensee's customers.

* * *

(b) * * * * *

(6) * * *

Table 11-Paired Frequencies

[Frequencies may be used only by Private Operational Fixed Point-to-Point Microwave licensees, unless otherwise noted]

(200 kHz bandwidth)

TRANSMIT (receive) (MHz)	RECEIVE (transmit) (MHz)
933.1750 /1/	942.1750 /1/
933.3750 /1/	942.3750 /1/
933.5750 /1/	942.5750 /1/
933.7750 /1/	942.7750 /1/
933.9750 /1/	942.9750 /1/
934.1750 /1/	943.1750 /1/
934.3750 /1/	943.3750 /1/
957.15	953.55
957.55	953.95
957.95	954.35
958.35	954.75
958.75	955.15
959.15	955.55

/1/ These frequencies also may be used by Common Carrier Fixed Point-to-Point Microwave licensees.

* * * * *

(j) 6,425 to 6,525 MHz: Mobile. Paired and un-paired operations permitted. Use of this spectrum for direct delivery of video programs to the general public or multi-channel cable distribution is not permitted. This band is co-equally shared with mobile stations licensed pursuant to Parts 74 and 78 of the Commission's Rules. Stations not intended to be operated while in motion will be licensed under the provision of §101.31. The following channel plans apply.

* * * * *

(r) * * * * *

(3) * * *

TRANSMIT (receive) (MHz)	RECEIVE (transmit) (MHz)
* * *	* * *
18337.0	18553.0.
* * *	* * *

(4) * * *

TRANSMIT (receive) (MHz)	RECEIVE (transmit) (MHz)
* * *	* * *
18005.0	19565.0.
* * *	* * *

(5) * * *

TRANSMIT (receive) (MHz)	RECEIVE (transmit) (MHz)
* * *	* * *
18130.0	19690.0.

340 MHz Separation	
18590.0	18930.0.
18610.0	18950.0.

* * * * *

(v)(1) * * *

2-A	38,650-38,700.....	2-B	39,350-39,400
3-A	38,700-38,750.....	3-B	39,400-39,450
4-A	38,750-38,800.....	4-B	39,450-39,500
5-A	38,800-38,850.....	5-B	39,500-39,550
6-A	38,850-38,900.....	6-B	39,550-39,600

* * *

(v)(2) Channels Blocks 1 through 14 are assigned for use within Economic Areas (EAs). Applicants are to apprise themselves of any licensed rectangular service areas within the EA for which they seek a license and comply with the requirements set forth in § 101.103. All of the channel blocks may be subdivided as desired by the licensee and used within its service area as desired without further authorization subject to the terms and conditions set forth in § 101.149.

* * * * *

33. Section 101.803 is amended by revising paragraphs (a) and (d) to read as follows:

§101.803 Frequencies.

(a) Frequencies in the following bands are available for assignment to television pickup and television non-broadcast pickup stations in this service:

* * *
14,200 to 14,400 MHz (8)
* * *

Notes

* * *

(5) Assignments to common carriers in this band are normally made in the segments