

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Rechannelization of the 17.7-19.7 GHz)	WT Docket No. 04-143
Frequency Band for Fixed Microwave Services)	
under Part 101 of the Commission’s Rules)	

NOTICE OF PROPOSED RULEMAKING

Adopted: March 31, 2004

Released: April 19, 2004

By the Commission:

Comments Date: **[30 days from publication in the Federal Register]**
 Reply Comments Date: **[60 days from publication in the Federal Register].**

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I. INTRODUCTION AND EXECUTIVE SUMMARY

1. In this *Notice of Proposed Rulemaking*, we address the channelization of the 17.7-19.7 GHz band (“18 GHz band”) in an effort to promote effective utilization of the portion of the band that is designated for use by terrestrial fixed services (“FS”). Previously, the Commission adopted a band plan to accommodate sharing of the 18 GHz band by the FS, Geostationary Satellite Orbit Fixed Satellite Service (“GSO/FSS”), Non-Geostationary Satellite Orbit Fixed-Satellite Service (“NGSO/FSS”), and Mobile-Satellite Service feeder links (“MSS/FL”).¹ As part of this band plan, the Commission authorized the

¹ See Redesignation of the 17.7-19.7 GHz Frequency Band, Blanket Licensing of Satellite Earth Stations in the 17.7-20.2 GHz and 27.5-30.0 GHz Frequency Bands, and the Allocation of Additional Spectrum in the 17.3-17.8 GHz

“blanket licensing” of satellite earth stations in some portions of the band where the FS had previously been co-primary.² While the FS community continues to have access to portions of the 18 GHz band either on an exclusive primary or co-primary basis, there is a need to rechannelize the FS portion of the 18 GHz band so that it can effectively and efficiently utilize the spectrum. We believe that such action is necessary not only to accommodate the FS licensees within the 18 GHz band that need to relocate but also to meet the needs of those FS licensees who seek narrow bandwidth channels. We believe that our proposals and decisions herein will promote more efficient use of the remaining FS spectrum in the 18 GHz band and help to increase spectrum availability for new FS operations, both by incumbents and new entrants.

2. The significant proposals contained in the *Notice of Proposed Rulemaking* are as follows:

- We propose a band plan for the FS paired and unpaired spectrum from 17.7-18.3 GHz and 19.3-19.7 GHz, based on a filing by the Fixed Wireless Communications Coalition (“FWCC”),³ consisting of a variety of channel bandwidths (including narrower bandwidths and those of thirty and fifty megahertz) and a block of unpaired spectrum from 17.7-17.74 GHz.
- We propose to designate a contiguous 500 megahertz block of one-way spectrum from 17.8-18.3 GHz for use by multichannel video programming distributors (“MVPDs”). We give licensees flexibility within such block to determine the appropriate bandwidth for their operations.
- We decline to grant a request filed by the by FWCC and the National Spectrum Managers Association (“NSMA”) for a blanket waiver of the Commission’s Rules to permit FS users to be licensed largely in accordance with the proposed band plan.⁴ Instead, we have determined that we will consider individual waiver requests meeting the conditions stated below.

II. BACKGROUND

3. The 18 GHz band currently serves a variety of terrestrial communications needs and is an important band for the growth of terrestrial services.⁵ Prior to the rule changes adopted by the Commission on June 8, 2000 in the *18 GHz Report and Order*, the 18 GHz band was available for co-

and 24.75-25.25 GHz Frequency Bands for Broadcast Satellite-Service Use, *Report and Order*, IB Docket No. 98-172, 15 FCC Rcd 13430 (2000) (“*18 GHz Report and Order*”).

² The Digital Electronic Message Service (DEMS) was relocated out of the 18 GHz band in March, 1997. *See* 47 C.F.R. § 101.47(r)(9).

³ Letter from Mitchell Lazarus, counsel for FWCC, to Magalie Salas, Secretary, FCC (May 4, 2001); *see also* Petition for Reconsideration from Leonard R. Raish and Andrew Kreig, Co-Chairs of the FWCC, filed on October 10, 2000, at 4-6 (asking Commission to address rechannelization of the 18 GHz band). *See also* Fixed Wireless Communications Coalition and National Spectrum Managers Association, Request for Waiver of Sections 101.31(b)(1)(iii) and 101.47(r) of the Commission’s Rules to Promote More Efficient Use of Spectrum, Request for Blanket Waiver (filed May 29, 2002) (“FWCC/NSMA Waiver Request”).

⁴ *Id.* at 1. The channel scheme filed in the waiver request is the same as in the FWCC letter except that the waiver request does not include the 1.25 megahertz channels.

⁵ *18 GHz Report and Order*, 15 FCC Rcd at 13431 ¶ 2.

primary FS and FSS use under Parts 21, 25, 74, 78, and 101 of the Commission's Rules.⁶ In its 18 GHz band plan, the Commission designated the following spectrum for FS use:⁷ the 17.7-18.3 GHz band on a primary basis, and the 19.3-19.7 GHz band on a co-primary basis (with MSS/FL).⁸ Recognizing the importance of existing FS systems in the 18 GHz band, the Commission permitted FS stations currently operating in spectrum designated in the *18 GHz Report and Order* for exclusive satellite use to continue to operate on a co-primary basis for a period of ten years, subject to newly established rules allowing satellite providers to relocate FS stations in the event of interference.⁹ During this ten-year period, existing FS stations may relocate in accordance with the procedures set forth in Section 101.85 of the Commission's Rules.¹⁰ After this period, existing FS stations may continue to operate on a non-interference basis, but no compensation will be paid if they relocate.¹¹ The Commission also stated, in the *First Order on Reconsideration*, that it would undertake a separate proceeding to rechannelize the portions of the 18 GHz band to which the FS still had access in order to facilitate this relocation.¹²

4. The following chart shows the bandwidth and allocation of 18 GHz FS channels prior to the *18 GHz Report and Order*. In the satellite blocks at the bottom of the chart, "(Blanket)" indicates the bands that are now allocated on a primary basis for exclusive satellite use.

⁶ 47 C.F.R. Parts 21, 25, 74, 78, and 101. See *18 GHz Report and Order*, 15 FCC Rcd 13430; Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Service, *First Report and Order and Fourth Notice of Proposed Rulemaking*, 11 FCC Rcd 19005 (1996) (establishing a band plan for the Ka-band, *i.e.*, the space-to-Earth (downlink) frequencies at 17.7-20.2 GHz and the corresponding Earth-to-space (uplink) frequencies at 27.5-30.0 GHz).

⁷ United States Government systems are authorized to operate in the 17.8-20.2 GHz band in accordance with footnote US334 in the United States Table of Frequency Allocations. Coordination between non-Government operations, both terrestrial and satellite, and these Government operations will continue to remain in effect. Nothing in the *18 GHz Report and Order* or this *Notice of Proposed Rulemaking* purports to change the relationship between Government and non-Government systems. See *18 GHz Report and Order*, 15 FCC Rcd at 13432 ¶ 4 (citing Amendment of Part 2 of the Commission's Rules to Allocate Spectrum for the Fixed-Satellite Service in the 17.8-20.2 GHz Band for Government Use, *Memorandum Opinion and Order*, 10 FCC Rcd 9931 (1995)). Likewise, nothing in this *Notice of Proposed Rulemaking* purports to change the requirements of 47 C.F.R. § 1.924(e), pertaining to sensitive Government Satellite Earth Stations in the 17.8-19.7 GHz band.

⁸ *18 GHz Report and Order*, 15 FCC Rcd at 13432, ¶ 4. In addition, the *18 GHz Report and Order* designated the 18.3-18.58 GHz band as co-primary between FS and GSO/FSS, but the Commission subsequently reallocated it to satellite only for blanket licensing. See Redesignation of the 17.7-19.7 GHz Frequency Band, Blanket Licensing of Satellite Earth Stations in the 17.7-20.2 GHz and 27.5-30.0 GHz Frequency Bands, and the Allocation of Additional Spectrum in the 17.3-17.8 GHz and 24.75-25.25 GHz Frequency Bands for Broadcast Satellite-Service Use, *Second Order on Reconsideration*, 17 FCC Rcd 24248, 24257-58, ¶ 22 (2002) ("*Second Order on Reconsideration*"). A petition for reconsideration of the *Second Order on Reconsideration* was filed by The Independent MultiFamily Communications Council on May 8, 2003.

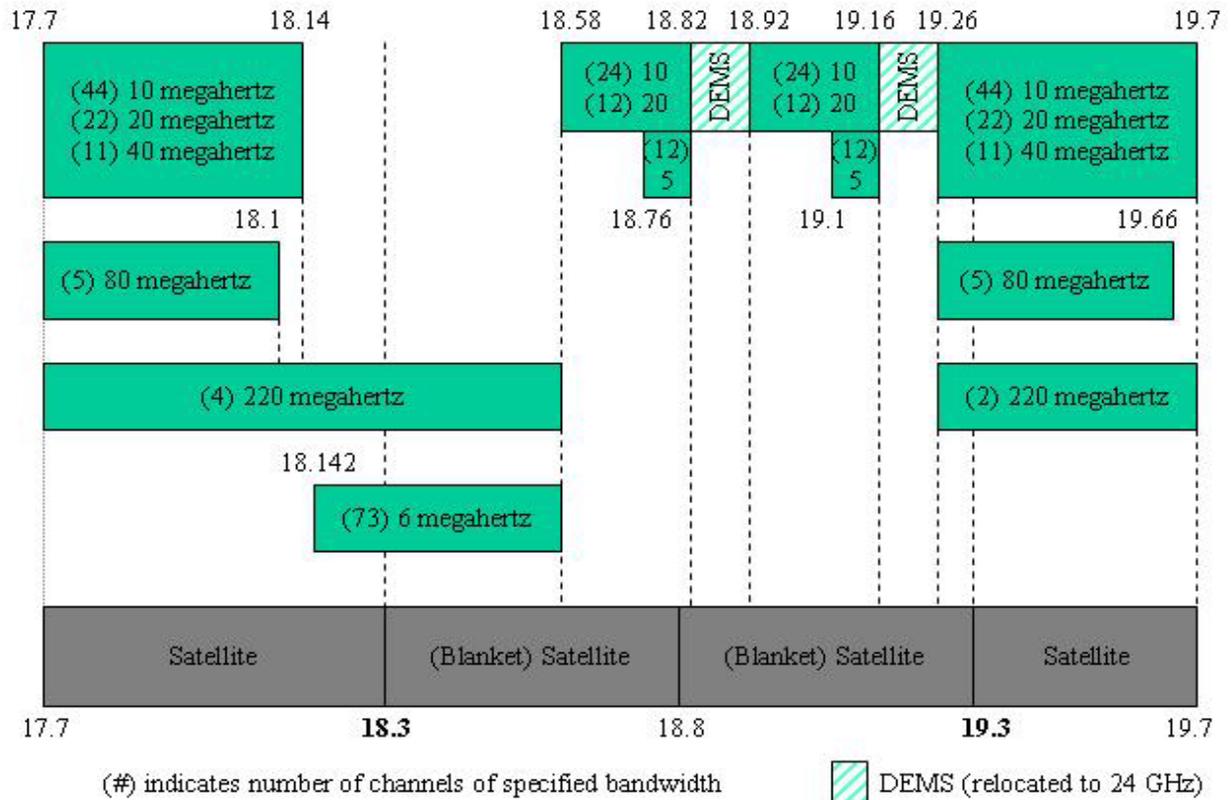
⁹ *18 GHz Report and Order*, 15 FCC Rcd at 13433, ¶ 5.

¹⁰ 47 C.F.R. § 101.85.

¹¹ *18 GHz Report and Order*, 15 FCC Rcd at 1346, ¶ 63. See also 47 C.F.R. § 101.85.

¹² Redesignation of the 17.7-19.7 GHz Frequency Band, Blanket Licensing of Satellite Earth Stations in the 17.7-20.2 GHz and 27.5-30.0 GHz Frequency Bands, and the Allocation of Additional Spectrum in the 17.3-17.8 and 24.75-25.25 GHz Frequency Bands for Broadcast Satellite-Service Use, *First Order on Reconsideration*, 16 FCC Rcd 19808, 19821, ¶ 26 (2001).

18 GHz Channel Sizes



The chart illustrates that the 18 GHz band spectrum available for FS containing the narrowest (five megahertz) paired channels, the 18.76-19.16 GHz band frequencies, was reallocated to satellite services. As a result, we must modify our Rules to accommodate narrow bandwidth channels in other parts of the 18 GHz band. Currently, FS users with bandwidth requirements of less than ten megahertz may be required to utilize channels of broader bandwidth. By utilizing a larger-than-necessary bandwidth, however, some FS operators will not be able to provide service without waivers because they would not be able to meet the efficiency standard limits specified in our rules.¹³

5. The chart also shows that most of the 18 GHz band spectrum containing six megahertz channels, and used mainly by private cable operators (“PCOs”) and other MVPDs, was reallocated to satellite services. The Commission recognized in the *18 GHz Report and Order* that the already high demand for 18.14-18.58 GHz band will increase.¹⁴ When the Commission reallocated this portion of the 18 GHz band, it noted that PCOs and other MVPDs were eligible to use other spectrum either below 18.3 GHz in

¹³ Under the efficiency rules in Section 101.141 of the Commission’s rules, a FS licensee must utilize its channel to the required limit. *See* 47 C.F.R. § 101.141.

¹⁴ *18 GHz Report and Order*, 15 FCC Rcd 13445-46, ¶ 33. The Commission stated that this portion of the 18 GHz band is vital to the success of FS relocation efforts and the continued viability of wireless cable providers that provide direct competition to traditional cable operators. *Id.*

the 18 GHz band or in the Cable Television Relay Service (12.7-13.25 GHz) band.¹⁵ Although the *Second Order on Reconsideration* and the *CARS Eligibility Order* granted MVPD licensees increased access to the 18 GHz band, the Commission did not remove the restriction for video in Section 101.603 of the Commission's rules,¹⁶ or amend the size of the channels in the 18 GHz band below 18.3 GHz to accommodate such use.¹⁷ The instant proceeding proposes rules to accommodate these Commission decisions.

III. DISCUSSION

6. *Proposed Band Plan.* In this proceeding, we propose to add channels in the 17.7-18.3 GHz band and 19.3-19.7 GHz band superimposed on the existing channels. Our proposed band plan is based on the FWCC and NSMA submissions regarding the current and future spectrum requirements of the different services currently authorized to operate in the 18 GHz band. In developing a specific band rechannelization approach, we sought to meet the following goals: (1) establishing a regulatory framework that addresses the spectrum requirements of the different services sharing the 18 GHz band; (2) promoting spectrum efficiency; (3) providing operational flexibility for 18 GHz band FS licensees; and (4) accommodating a variety of FS operations without imposing undue administrative burdens on licensees or the Commission.

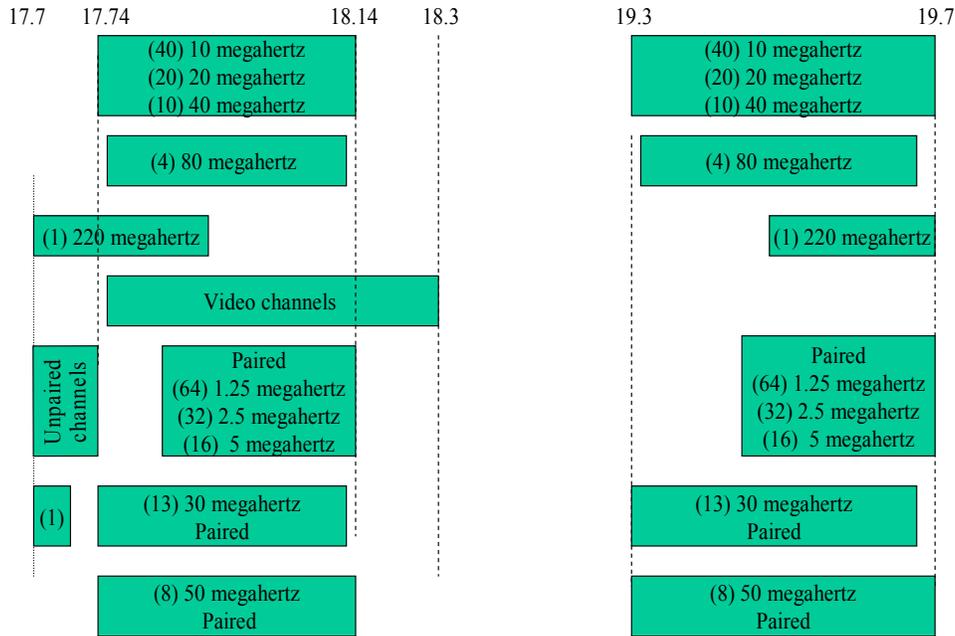
7. We tentatively conclude that the rechannelization approach that we propose for the 18 GHz band would allow us to realize several spectrum management and public interest benefits. Specifically, the proposed band plan ensures continued development of FS service in the 18 GHz band, promotes ease of coordination, accommodates equipment remanufacturing, and encourages efficient use of this spectrum. The following chart shows the location, size, and number of channels that we propose to superimpose on the existing channels:

¹⁵ *Second Order on Reconsideration*, 17 FCC Rcd at 24250, ¶ 6. This "enhanced eligibility" was the result of the Commission's decision in another proceeding. See Amendment of Eligibility Requirements in Part 78 Regarding 12 GHz Cable Television Relay Service, *Report and Order*, CS Docket No. 99-250, 17 FCC Rcd 9930, 9930, 1 (2002) (*CARS Eligibility Order*).

¹⁶ See 47 C.F.R. § 101.603(b)(3) (prohibiting use of 18 GHz frequencies, other than 18.142-18.580 GHz, for the final link in the chain of transmission of program material).

¹⁷ See 47 C.F.R. § 101.147(r).

New 18 GHz Channel Sizes



Pictures are not to scale

(#) indicates number of channels of specified bandwidth

8. In the *18 GHz Report and Order*, the Commission recognized that the relocation and requisite rechannelization puts into place a process that will affect a significant number of fixed microwave links.¹⁸ The Commission urged the affected parties to find ways to minimize the cost and facilitate the relocations necessary for the introduction of new satellite services.¹⁹ We seek comment on the proposed rechannelization set forth above, as well as suggestions for other band plans or pairing schemes with explanations of why they might better effectuate the Commission’s goals. While we are proposing changes only to our Part 101 rules, licensees in Parts 21, 74 and 78 could be affected because of the shared use with these terrestrial services, so we also encourage them to comment on our proposals. We also note that the reallocation of the 18 GHz band eliminated portions of all three FS 220 megahertz channel pairs, and we seek comment on whether a need exists to maintain any 220 megahertz channel pair.

9. In addition, we propose to permit unpaired use by any FS licensee of the 17.7-17.74 GHz band, which was paired with the 19.26-19.3 GHz band. We also propose to permit applicants to request any bandwidth based on their specific needs, on the condition that aggregated channels are contiguous channels (minus channels that are already licensed in the area and thus blocked). We believe that this approach will provide FS licensees additional operational flexibility within the 18 GHz band without compromising our efforts to facilitate effective and expeditious relocation of those 18 GHz band

¹⁸ *18 GHz Report and Order*, 15 FCC Rcd at 13470 ¶ 84.

¹⁹ *Id.*

licensees from other portions of the band. We further believe that the condition that aggregated channels be contiguous channels is necessary in order to prevent licensees from spacing their channels in a manner that effectively could prevent another entity from using the remaining spectrum in the same area. We seek comment on these proposals and on whether channels in the 17.7-17.74 MHz band should be limited to one-way service, or permitted to be assignable as part of a pair with another channel, perhaps where, for example, the return pair is already in use and therefore blocked.

10. *Flexibility for MVPDs.* Now that the PCOs and other MVPDs no longer will have primary access to the 18.3-18.58 GHz band frequencies, we propose to rechannelize the spectrum from 17.8-18.3 GHz to accommodate their ability to continue to provide entertainment video and other enhanced services utilizing frequencies within the 18 GHz band. As noted earlier, the Commission previously granted MVPD licensees increased access to the 18 GHz band,²⁰ but did not make corresponding changes to the bandwidths for channels below the 18.142 GHz band or applicable operational restrictions. Specifically, the Commission did not change the frequencies to six megahertz nor modify the rule limiting use of 18 GHz spectrum for the final radio frequency link for certain video transmissions to below 18.142 GHz. We believe that such changes are necessary to fully effectuate the Commission's efforts to provide MVPD licensees additional operational flexibility and increased access to the 18 GHz band. Accordingly, we propose to make two changes to the rules governing MVPD use of the 18 GHz band.

11. First, we propose to expand the sub-band in which 18 GHz spectrum may be used for the final radio frequency link to distribute video from the present 438 megahertz (18.142-18.58 GHz) to 780 megahertz (17.8-18.58 GHz). Thus, FS entities will have more flexible use of 18 GHz band frequencies on both a private and common carrier basis to provide a host of video, internet, voice and/or data services. We seek comment on this proposal.

12. Second, we propose to permit MVPD providers in the 17.8-18.3 GHz sub-band to use whatever size channels in contiguous spectrum that they deem necessary to accommodate analog or digital transmission techniques and to allow them to change compression techniques without further modification of their licenses.²¹ We believe that some MVPD licensees in the future will be digital instead of analog, and will use compression techniques to enhance their spectrum efficiency to get more channels. We therefore believe it is beneficial to allow licensees the flexibility to use either analog or digital emissions, choose the size of each channel, and use compression techniques without requiring additional license modifications. We seek comment on the proposal to rechannelize this portion of the band. We also seek comment on whether to allow the emission and channelization flexibility from 18.3 to 18.58 GHz. Commenters should address whether such changes would affect the relocation status of licensees in that sub-band. We believe that our proposed changes will afford MVPDs opportunities to gain access to large blocks of spectrum whereby they are able to provide video services in a more balanced competitive environment.²²

²⁰ See *Second Order on Reconsideration*, 17 FCC Rcd at 24253-56 ¶¶ 14-19; *CARS Eligibility Order*, 17 FCC Rcd at 9930 ¶ 1.

²¹ As required by 47 C.F.R. § 1.924(e), modification of an existing station license in this band which would change the frequency, power, emission, modulation, polarization, antenna height or directivity, or location of such a station, must be coordinated with the Federal Government by the Commission before an authorization will be issued. Compression techniques can be changed within certain emission designations without requiring an application.

²² See ¶ 5 *infra*. We are concerned that the cost to operate and maintain equipment in two separate frequency bands, for example some channels in 18 GHz and some in 13 GHz, would be overly burdensome due to duplication of equipment and the cost of power. This would require a separate set of antennas, transmitters, and receivers in each

13. *Waiver Request.* FWCC and NSMA request a blanket waiver to permit the coordination and licensing of FS licenses in the 18 GHz band at bandwidths of 2.5, 5, 30, and 50 megahertz, in addition to the 10, 20, 40, and 80 megahertz bandwidths presently allowed under the Rules.²³ They state that the purpose of the waiver is to eliminate the present need for FS users to coordinate and license more spectrum than they actually need.²⁴ In addition to the loss of narrow bandwidth channels resulting from the reallocation of the 18.3-19.3 GHz band, FWCC and NSMA note that recent advances have created extremely efficient modulations in channels that are either 30 or 50 megahertz wide.²⁵ FWCC and NSMA also ask the Commission to allow conditional authority for stations utilizing the proposed alternate channels.²⁶ FWCC and NSMA claim that the requested waivers will improve spectrum efficiency, and hence accommodate more users in the same spectrum without adverse effects to any person.²⁷

14. Based upon our review of the record, we conclude that grant of the requested waiver is not warranted. We may grant a waiver of the Commission's rules when (i) the underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and a grant of the requested waiver would be in the public interest; or (ii) in view of unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome, or contrary to the public interest, or the applicant has no reasonable alternative.²⁸ We find that because FWCC and NSMA did not present any unique circumstances to warrant a blanket waiver, their request is indistinguishable from a request for a rulemaking. While we find that a rule change may be appropriate, we find that the proper mechanism for such a change is through a notice and comment rulemaking proceeding and not through a decision to grant a blanket waiver. Where a blanket waiver may create some uncertainty in the industry as to what is permissible under the waiver, a rulemaking proceeding will establish clear standards for the industry to follow. Additionally, rather than being a unique or unusual circumstance, FWCC and NSMA's stated need and proposal to license spectrum in smaller channels is instead a natural ramification of the FS community's loss of the smaller bandwidth channels in the 18 GHz band as well as the middle 1000 megahertz from 18.3 GHz to 19.3 GHz for FS operations. Hence, we find that FWCC and NSMA's proposed service and circumstances are not so unusual as to warrant grant of a waiver under the present circumstances, nor would it be in the public interest to grant the requested blanket waiver because of the uncertainty that may create for FS users.

15. While we deny the request for a blanket waiver, we believe that some relief pending the outcome of this rulemaking is appropriate to address the concerns described by FWCC and NSMA.

frequency band and drive up the cost to operate due not only to the extra equipment, but also to the electricity needed to operate the extra devices.

²³ FWCC/NSMA Waiver Request at 2.

²⁴ *Id.* at 2.

²⁵ *Id.* at 3. FWCC and NSMA state that using high-order modulation, these 18 GHz systems with 30 or 50 MHz channels can offer data rates of 155 and 311 Mbits/second, respectively, equivalent to 5.1 and 6.2 bits/sec/Hz, which represent new highs in spectrum efficiency. *Id.* at 5.

²⁶ *Id.* at 3. Stations with conditional authority may commence operation upon the filing of a properly completed application, *see* 47 C.F.R. § 101.31(b)(1), but conditional authority ordinarily is not available when a rule waiver is required, *see* 47 C.F.R. § 101.31(b)(1)(iii).

²⁷ FWCC/NSMA Waiver Request at 3.

²⁸ *See* 47 C.F.R. § 1.925(b)(3).

Specifically, we find that those FS users that are able to operate by taking less bandwidth than they are currently required to take in the Commission's rules, may submit individual waiver requests to use less bandwidth. As noted by FWCC and NMSA, a 2.5 or 5 megahertz user has no choice but to coordinate and license a full 10 megahertz channel.²⁹ We believe that allowing FS users to file waivers provides a reasonable solution for those users that are currently required to coordinate and license more spectrum than they actually need. We also find that permitting FS users to file such waivers is in the public interest because it furthers the Commission's goals of promoting efficient and effective spectrum utilization.

16. Therefore, to the extent that an FS applicant can demonstrate in its waiver petition that (a) there are no channels in 18 GHz under the existing plan that satisfy its requested need, (b) its proposed use is more spectrum-efficient than the use that would have been required under the current rules, and, (c) it has completed the frequency coordination procedures and met all of the other prerequisites of section 101.31 of the Commission's rules for conditional authorization, the Commission will consider granting a waiver of the size of a channel under section 101.147(r).³⁰ As long as the stated conditions for waiver are met, the Commission also will consider granting an accompanying waiver of section 101.31(b)(1)(iii), which otherwise would bar conditional authorization of an application that is subject to a waiver.³¹ We note that any authorizations that may be granted in accordance with these waiver procedures would be conditioned on and subject to the outcome of this proceeding and, therefore, might require modification as a result of the Commission's final action.

IV. PROCEDURAL MATTERS

17. *Initial Regulatory Flexibility Analysis.* The Initial Regulatory Flexibility Analysis for this *Notice of Proposed Rulemaking*, as required by the Regulatory Flexibility Act, *see* 5 U.S.C. § 603, is contained in Appendix D.

18. *Paperwork Reduction Analysis.* This Notice does not contain either a proposed or modified information collection.

19. *Ex Parte* Presentations. For purposes of this permit-but-disclose notice and comment rulemaking proceeding, members of the public are advised that *ex parte* presentations are permitted, except during the Sunshine Agenda period, provided they are disclosed under the Commission's rules.³²

20. *Comment Dates.* Pursuant to Sections 1.415 and 1.419 of the Commission's rules, 47 C.F.R. §§ 1.415, 1.419, interested parties may file comments on or before **[30 days from publication in the Federal Register]**, and reply comments on or before **[60 days from publication in the Federal Register]**. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS) or by filing paper copies. *See Electronic Filing of Documents in Rulemaking Proceedings*, 63 Fed. Reg. 24121 (1998).

²⁹ FWCC/NSMA Waiver Request at 4.

³⁰ 47 C.F.R. § 101.147(r).

³¹ 47 C.F.R. § 101.31(b)(1)(iii). As noted by FWCC and NSMA, the FS community relies heavily on conditional authorization. *See* FWCC/NSMA Waiver Request at 6.

³² *See generally* 47 C.F.R. §§ 1.1202, 1.1203, 1.1206(a).

21. Comments filed through the ECFS can be sent as an electronic file via the Internet to <<http://www.fcc.gov/e-file/ecfs.html>>. Generally, only one copy of an electronic submission must be filed. In completing the transmittal screen, commenters should include their full name, U.S. Postal Service mailing address, and the applicable docket or rulemaking number. Parties may also submit an electronic comment by Internet e-mail. To get filing instructions for e-mail comments, commenters should send an e-mail to ecfs@fcc.gov, and should include the following words in the body of the message, "get form <your e-mail address>." A sample form and directions will be sent in reply. Parties who choose to file by paper must file an original and four copies of each filing. Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail (although we continue to experience delays in receiving U.S. Postal Service mail). The Commission's contractor, Natek, Inc., will receive hand-delivered or messenger-delivered paper filings for the Commission's Secretary at 236 Massachusetts Avenue, N.E., Suite 110, Washington, DC 20002. The filing hours at this location are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes must be disposed of before entering the building. Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743. U.S. Postal Service first-class mail, Express Mail, and Priority Mail should be addressed to 445 12th Street, S.W., Washington, DC 20554. All filings must be addressed to the Commission's Secretary, Marlene H. Dortch, Office of the Secretary, Federal Communications Commission.

22. For further information concerning this Notice of Proposed Rulemaking, contact Cara Voth at (202) 418-0025, e-mail: cara.voth@fcc.gov or Mr. Michael Pollak at (202) 418-1682, e-mail: michael.pollak@fcc.gov, or via TTY (202) 418-7233, Wireless Telecommunications Bureau, Federal Communications Commission, Washington, D.C. 20554. Alternative formats (computer diskette, large print, audio cassette, and Braille) are available to persons with disabilities by contacting Brian Millin at (202) 418-7426, TTY (202) 418-7365, or via e-mail to bmillin@fcc.gov. This *Notice of Proposed Rulemaking* can be downloaded at <http://www.fcc.gov/Wireless/Orders/2004/fcc>.

V. ORDERING CLAUSES

23. ACCORDINGLY, IT IS ORDERED that, pursuant to Sections 1, 4(i), 302, and 303(f) and (r) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 1, 154(i), 302, and 303(f) and (r), NOTICE IS HEREBY GIVEN of the proposed regulatory changes described in this *Notice of Proposed Rulemaking* and that COMMENT IS SOUGHT on these proposals.

24. IT IS FURTHER ORDERED that, pursuant to Section 4(i) of the Communications Act of 1934, as amended, 47 U.S.C. § 154(i), and Section 1.925 of the Commission's Rules, 47 C.F.R. § 1.925, the Request for Blanket Waiver, filed May 29, 2002, by the Fixed Wireless Communications Coalition and the National Spectrum Managers Association, IS HEREBY DENIED.

25. IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this *Notice of Proposed Rulemaking*, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the U.S. Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

Appendix A

Existing Paired Channels Remaining After Relocation (Center Frequency)

80 Megahertz Channels		40 Megahertz Channels		20 Megahertz Channels		10 Megahertz Channels	
T/R	R/T	T/R	R/T	T/R	R/T	T/R	R/T
17820	19380	17760	19320	17750	19310	17745	19305
17900	19460	17800	19360	17770	19330	17755	19315
17980	19540	17840	19400	17790	19350	17765	19325
18060	19620	17880	19440	17810	19370	17775	19335
		17920	19480	17830	19390	17785	19345
		17960	19520	17850	19410	17795	19355
		18000	19560	17870	19430	17805	19365
		18040	19600	17890	19450	17815	19375
		18080	19640	17910	19470	17825	19385
		18120	19680	17930	19490	17835	19395
				17950	19510	17845	19405
				17970	19530	17855	19415
				17990	19550	17865	19425
				18010	19570	17875	19435
				18030	19590	17885	19445
				18050	19610	17895	19455
				18070	19630	17905	19465
				18090	19650	17915	19475
				18110	19670	17925	19485
				18130	19690	17935	19495
						17945	19505
						17955	19515
						17965	19525
						17975	19535
						17985	19545
						17995	19555
						18005	19565
						18015	19575
						18025	19585
						18035	19595
						18045	19605

						18055	19615
						18065	19625
						18075	19635
						18085	19645
						18095	19655
						18105	19665
						18115	19675
						18125	19685
						18135	19695

17.7-17.74 GHz remains unpaired due to the reassignment of 19.26-19.3 GHz to satellite services.

Appendix B

Proposed Additional Channels for 18 GHz Band Plan (Center Frequency)

50 Megahertz Channels		30 Megahertz Channels		5 Megahertz Channels		2.5 Megahertz Channels		1.25 Megahertz Channels	
T/R	R/T	T/R	R/T	T/R	R/T	T/R	R/T	T/R	R/T
17765	19325	17715	N/A	17702.5	N/A	17701.25	N/A	18060.625	19620.625
17815	19375	17755	19315	17707.5	N/A	17703.75	N/A	18061.875	19621.875
17865	19425	17785	19345	17712.5	N/A	17706.25	N/A	18063.125	19623.125
17915	19475	17815	19375	17717.5	N/A	17708.75	N/A	18064.375	19624.375
17965	19525	17845	19405	17722.5	N/A	17711.25	N/A	18065.625	19625.625
18015	19575	17875	19435	17727.5	N/A	17713.75	N/A	18066.875	19626.875
18065	19625	17905	19465	17732.5	N/A	17716.25	N/A	18068.125	19628.125
18115	19675	17935	19495	17737.5	N/A	17718.75	N/A	18069.375	19629.375
		17965	19525	18062.5	19622.5	17721.25	N/A	18070.625	19630.625
		17995	19555	18067.5	19627.5	17723.75	N/A	18071.875	19631.875
		18025	19585	18072.5	19632.5	17726.25	N/A	18073.125	19633.125
		18055	19615	18077.5	19637.5	17728.75	N/A	18074.375	19634.375
		18085	19645	18082.5	19642.5	17731.25	N/A	18075.625	19635.625
		18115	19675	18087.5	19647.5	17733.75	N/A	18076.875	19636.875
				18092.5	19652.5	17736.25	N/A	18078.125	19638.125
				18097.5	19657.5	17738.75	N/A	18079.375	19639.375
				18102.5	19662.5	18061.25	19621.25	18080.625	19640.625
				18107.5	19667.5	18063.75	19623.75	18081.875	19641.875
				18112.5	19672.5	18066.25	19626.25	18083.125	19643.125
				18117.5	19677.5	18068.75	19628.75	18084.375	19644.375
				18122.5	19682.5	18071.25	19631.25	18085.625	19645.625
				18127.5	19687.5	18073.75	19633.75	18086.875	19646.875
				18132.5	19692.5	18076.25	19636.25	18088.125	19648.125
				18137.5	19697.5	18078.75	19638.75	18089.375	19649.375
						18081.25	19641.25	18090.625	19650.625
						18083.75	19643.75	18091.875	19651.875
						18086.25	19646.25	18093.125	19653.125
						18088.75	19648.75	18094.375	19654.375
						18091.25	19651.25	18095.625	19655.625
						18093.75	19653.75	18096.875	19656.875
						18096.25	19656.25	18098.125	19658.125
						18098.75	19658.75	18099.375	19659.375

						18101.25	19661.25	18100.625	19660.625
						18103.75	19663.75	18101.875	19661.875
						18106.25	19666.25	18103.125	19663.125
						18108.75	19668.75	18104.375	19664.375
						18111.25	19671.25	18105.625	19665.625
						18113.75	19673.75	18106.875	19666.875
						18116.25	19676.25	18108.125	19668.125
						18118.75	19678.75	18109.375	19669.375
						18121.25	19681.25	18110.625	19670.625
						18123.75	19683.75	18111.875	19671.875
						18126.25	19686.25	18113.125	19673.125
						18128.75	19688.75	18114.375	19674.375
						18131.25	19691.25	18115.625	19675.625
						18133.75	19693.75	18116.875	19676.875
						18136.25	19696.25	18118.125	19678.125
						18138.75	19698.75	18119.375	19679.375
								18120.625	19680.625
								18121.875	19681.875
								18123.125	19683.125
								18124.375	19684.375
								18125.625	19685.625
								18126.875	19686.875
								18128.125	19688.125
								18129.375	19689.375
								18130.625	19690.625
								18131.875	19691.875
								18133.125	19693.125
								18134.375	19694.375
								18135.625	19695.625
								18136.875	19696.875
								Note: Unpaired channels are available for one-way use or TDD systems	
18139.375	19699.375								

APPENDIX C: PROPOSED RULES

For the reasons set forth herein, part 101 of title 47 of the Code of Federal Regulations is proposed to be amended as follows:

PART 101—FIXED MICROWAVE SERVICES

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

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

2. Section 101.147(r)(vii-ix) is amended and 101.147(r)(x) is added to read as follows:

§ 101.147 Frequency assignments.

* * * * *

(r)(vii) After November 19, 2002, no applications for new stations for Part 101 licenses will be accepted in the 18.3-18.58 GHz band.

(viii) After June 8, 2000, no applications for new stations for Part 101 licenses will be accepted in the 18.58-19.3 GHz band.

(ix) Licensees, except 24 GHz band licensees, may use either a two-way link or one frequency of a frequency pair for a one-way link and must coordinate proposed operations pursuant to the procedures required in section 101.103 of this subpart.)

[Option 1] (x) Applicants who request one-way spectrum in 17.7-18.3 GHz can use any size channels necessary, but must request contiguous spectrum (minus channels that are already licensed in the area and thus blocked) for all their needs in order to prevent such applicants from spacing their channels in a manner that effectively could prevent other licensees from using the remaining spectrum within the same area. However, channels still must meet the efficiency requirements of section 101.141 of this subpart.

[Option 2] (x) Applicants who request one-way spectrum in 17.7-18.58 GHz can use any size channels necessary, but must request contiguous spectrum (minus channels that are already licensed in the area and thus blocked) for all their needs in order to prevent such applicants from spacing their channels in a manner that effectively could prevent other licensees from using the remaining spectrum within the same area. However, channels still must meet the efficiency requirements of section 101.141 of this subpart.

- (1) 1.25 Megahertz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)

17700.625.....	NA
17701.875.....	NA
17703.125.....	NA
17704.375.....	NA
17705.625.....	NA

17706.875.....	NA
17708.125.....	NA
17709.375.....	NA
17710.625.....	NA
17711.875.....	NA
17713.125.....	NA
17714.375.....	NA
17715.625.....	NA
17716.875.....	NA
17718.125.....	NA
17719.375.....	NA
17721.625.....	NA
17722.875.....	NA
17723.125.....	NA
17724.375.....	NA
17725.625.....	NA
17726.875.....	NA
17728.125.....	NA
17729.375.....	NA
17730.625.....	NA
17731.875.....	NA
17733.125.....	NA
17734.375.....	NA
17735.625.....	NA
17736.875.....	NA
17738.125.....	NA
17739.375.....	NA
18060.625.....	19620.625
18061.875.....	19621.875
18063.125.....	19623.125
18064.375.....	19624.375
18065.625.....	19625.625
18066.875.....	19626.875
18068.125.....	19628.125
18069.375.....	19629.375
18070.625.....	19630.625
18071.875.....	19631.875
18073.125.....	19633.125
18074.375.....	19634.375
18075.625.....	19635.625
18076.875.....	19636.875
18078.125.....	19638.125
18079.375.....	19639.375
18080.625.....	19640.625
18081.875.....	19641.875
18083.125.....	19643.125
18084.375.....	19644.375
18085.625.....	19645.625
18086.875.....	19646.875
18088.125.....	19648.125
18089.375.....	19649.375

18090.625.....	19650.625
18091.875.....	19651.875
18093.125.....	19653.125
18094.375.....	19654.375
18095.625.....	19655.625
18096.875.....	19656.875
18098.125.....	19658.125
18099.375.....	19659.375
18100.625.....	19660.625
18101.875.....	19661.875
18103.125.....	19663.125
18104.375.....	19664.375
18105.625.....	19665.625
18106.875.....	19666.875
18108.125.....	19668.125
18109.375.....	19669.375
18110.625.....	19670.625
18111.875.....	19671.875
18113.125.....	19673.125
18114.375.....	19674.375
18115.625.....	19675.625
18116.875.....	19676.875
18118.125.....	19678.125
18119.375.....	19679.375
18120.625.....	19680.625
18121.875.....	19681.875
18123.125.....	19683.125
18124.375.....	19684.375
18125.625.....	19685.625
18126.875.....	19686.875
18128.125.....	19688.125
18129.375.....	19689.375
18130.625.....	19690.625
18131.875.....	19691.875
18133.125.....	19693.125
18134.375.....	19694.375
18135.625.....	19695.625
18136.875.....	19696.875
18138.125.....	19698.125
18139.375.....	19699.375

(2) 2 Megahertz maximum authorized bandwidth channel:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
----- 18141.0..... -----	N/A

(3) 2.5 Megahertz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
17701.25.....	N/A
17703.75.....	N/A
17706.25.....	N/A
17708.75.....	N/A
17711.25.....	N/A
17713.75.....	N/A
17716.25.....	N/A
17718.75.....	N/A
17721.25.....	N/A
17723.75.....	N/A
17726.25.....	N/A
17728.75.....	N/A
17731.25.....	N/A
17733.75.....	N/A
17736.25.....	N/A
17738.75.....	N/A
18061.25.....	19621.25
18063.75.....	19623.75
18066.25.....	19626.25
18068.75.....	19628.75
18071.25.....	19631.25
18073.75.....	19633.75
18076.25.....	19636.25
18078.75.....	19638.75
18081.25.....	19641.25
18083.75.....	19643.75
18086.25.....	19646.25
18088.75.....	19648.75
18091.25.....	19651.25
18093.75.....	19653.75
18096.25.....	19656.25
18098.75.....	19658.75
18101.25.....	19661.25
18103.75.....	19663.75
18106.25.....	19666.25
18108.75.....	19668.75
18111.25.....	19671.25
18113.75.....	19673.75
18116.25.....	19676.25
18118.75.....	19678.75
18121.25.....	19681.25
18123.75.....	19683.75
18126.25.....	19686.25
18128.75.....	19688.75
18131.25.....	19691.25

18133.75.....	19693.75
18136.25.....	19696.25
18138.75.....	19698.75

(4) 5 Megahertz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)

340 Megahertz Separation	
(* channels no longer available on a primary basis)	

18762.5*.....	19102.5*
18767.5*.....	19107.5*
18772.5*.....	19112.5*
18777.5*.....	19117.5*
18782.5*.....	19122.5*
18787.5*.....	19127.5*
18792.5*.....	19132.5*
18797.5*.....	19137.5*
18802.5*.....	19142.5*
18807.5*.....	19147.5*
18812.5*.....	19152.5*
18817.5*.....	19157.5*

(5) 5 Megahertz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)

1560 Megahertz Separation	

17702.5.....	N/A
17707.5.....	N/A
17712.5.....	N/A
17717.5.....	N/A
17722.5.....	N/A
17727.5.....	N/A
17732.5.....	N/A
17737.5.....	N/A
18062.5.....	19622.5
18067.5.....	19627.5
18072.5.....	19632.5
18077.5.....	19637.5
18082.5.....	19642.5
18087.5.....	19647.5
18092.5.....	19652.5

18097.5.....	19657.5
18102.5.....	19662.5
18107.5.....	19667.5
18112.5.....	19672.5
18117.5.....	19677.5
18122.5.....	19682.5
18127.5.....	19687.5
18132.5.....	19692.5
18137.5.....	19697.5

(6) 6 Megahertz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
--------------------------	--------------------------------

216 Megahertz Separation

(* channels are no longer available on primary basis)

new channels from 17.8-18.3 GHz may be of any channel size but must be contiguous and used for video use by an MVPD.

18145.0.....	N/A
18151.0.....	18367.0*
18157.0.....	18373.0*
18163.0.....	18379.0*
18169.0.....	18385.0*
18175.0.....	18391.0*
18181.0.....	18397.0*
18187.0.....	18403.0*
18193.0.....	18409.0*
18199.0.....	18415.0*
18205.0.....	18421.0*
18211.0.....	18427.0*
18217.0.....	18433.0*
18223.0.....	18439.0*
18229.0.....	18445.0*
18235.0.....	18451.0*
18241.0.....	18457.0*
18247.0.....	18463.0*
18253.0.....	18469.0*
18259.0.....	18475.0*
18265.0.....	18481.0*
18271.0.....	18487.0*
18277.0.....	18493.0*
18283.0.....	18499.0*
18289.0.....	18505.0*
18295.0.....	18511.0*
18301.0*	18517.0*
18307.0*	18523.0*
18313.0*	18529.0*
18319.0*	18535.0*

18325.0*	18541.0*
18331.0*	18547.0*
18337.0*	18553.0*
18343.0*	18559.0*
18349.0*	18565.0*
18355.0*	18571.0*
18361.0*	18577.0*

(7) 10 Megahertz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
1560 Megahertz Separation (* channels are no longer available on primary basis)	
17705.0	19265.0*
17715.0	19275.0*
17725.0	19285.0*
17735.0	19295.0*
17745.0	19305.0
17755.0	19315.0
17765.0	19325.0
17775.0	19335.0
17785.0	19345.0
17795.0	19355.0
17805.0	19365.0
17815.0	19375.0
17825.0	19385.0
17835.0	19395.0
17845.0	19405.0
17855.0	19415.0
17865.0	19425.0
17875.0	19435.0
17885.0	19445.0
17895.0	19455.0
17905.0	19465.0
17915.0	19475.0
17925.0	19485.0
17935.0	19495.0
17945.0	19505.0
17955.0	19515.0
17965.0	19525.0
17975.0	19535.0
17985.0	19545.0
17995.0	19555.0
18005.0	19565.0
18015.0	19575.0

18025.0.....	19585.0
18035.0.....	19595.0
18045.0.....	19605.0
18055.0.....	19615.0
18065.0.....	19625.0
18075.0.....	19635.0
18085.0.....	19645.0
18095.0.....	19655.0
18105.0.....	19665.0
18115.0.....	19675.0
18125.0.....	19685.0
18135.0.....	19695.0

340 Megahertz Separation

18585.0*.....	18925.0*
18595.0*.....	18935.0*
18605.0*.....	18945.0*
18615.0*.....	18955.0*
18625.0*.....	18965.0*
18635.0*.....	18975.0*
18645.0*.....	18985.0*
18655.0*.....	18995.0*
18665.0*.....	19005.0*
18675.0*.....	19015.0*
18685.0*.....	19025.0*
18695.0*.....	19035.0*
18705.0*.....	19045.0*
18715.0*.....	19055.0*
18725.0*.....	19065.0*
18735.0*.....	19075.0*
18745.0*.....	19085.0*
18755.0*.....	19095.0*
18765.0*.....	19105.0*
18775.0*.....	19115.0*
18785.0*.....	19125.0*
18795.0*.....	19135.0*
18805.0*.....	19145.0*
18815.0*.....	19155.0*

(8) 20 Megahertz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
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1560 Megahertz Separation

(* channels are no longer available on primary basis)

17710.0.....	19270.0*
17730.0.....	19290.0*
17750.0.....	19310.0
17770.0.....	19330.0
17790.0.....	19350.0
17810.0.....	19370.0
17830.0.....	19390.0
17850.0.....	19410.0
17870.0.....	19430.0
17890.0.....	19450.0
17910.0.....	19470.0
17930.0.....	19490.0
17950.0.....	19510.0
17970.0.....	19530.0
17990.0.....	19550.0
18010.0.....	19570.0
18030.0.....	19590.0
18050.0.....	19610.0
18070.0.....	19630.0
18090.0.....	19650.0
18110.0.....	19670.0
18130.0.....	19690.0

 340 Megahertz Separation

18590.0*.....	18930.0*
18610.0*.....	18950.0*
18630.0*.....	18970.0*
18650.0*.....	18990.0*
18670.0*.....	19010.0*
18690.0*.....	19030.0*
18710.0*.....	19050.0*
18730.0*.....	19070.0*
18750.0*.....	19090.0*
18770.0*.....	19110.0*
18790.0*.....	19130.0*
18810.0*.....	19150.0*

(9) 30 Megahertz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
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 1560 Megahertz Separation

17715.0.....	N/A
17755.0.....	19315.0
17785.0.....	19345.0

17815.0.....	19375.0
17845.0.....	19405.0
17875.0.....	19435.0
17905.0.....	19465.0
17935.0.....	19495.0
17965.0.....	19525.0
17995.0.....	19555.0
18025.0.....	19585.0
18055.0.....	19615.0
18085.0.....	19645.0
18115.0.....	19675.0

(10) 40 Megahertz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)

1560 Megahertz Separation	
(* channels are no longer available on primary basis)	

17720.0.....	19280.0*
17760.0.....	19320.0
17800.0.....	19360.0
17840.0.....	19400.0
17880.0.....	19440.0
17920.0.....	19480.0
17960.0.....	19520.0
18000.0.....	19560.0
18040.0.....	19600.0
18080.0.....	19640.0
18120.0.....	19680.0

(1) 50 Megahertz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)

1560 Megahertz Separation	

17765.0.....	19325.0
17815.0.....	19375.0
17865.0.....	19425.0
17915.0.....	19475.0
17965.0.....	19525.0
18015.0.....	19575.0
18065.0.....	19625.0

18115.0..... 19675.0

(12) 80 Megahertz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
1560 Megahertz Separation (* channels are no longer available on primary basis)	
17740.0.....	19300.0*
17820.0.....	19380.0
17900.0.....	19460.0
17980.0.....	19540.0
18060.0.....	19620.0

(13) 220 Megahertz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
(* channels are no longer available on primary basis)	
17810.0.....	18470.0*
18030.0.....	19370.0*
18250.0*.....	19590.0
17810.0.....(new channel pairing).....	19590.0

(9) The following frequencies on channels 35-39 are available for point-to-multipoint systems and are available by geographic area licensing in the 24 GHz Service to be used as the licensee desires. The 24 GHz spectrum can be aggregated or disaggregated and does not have to be used in the transmit/receive manner shown except to comply with international agreements along the US borders. Channels 35 through 39 are licensed in the 24 GHz Service by Economic Areas for any digital fixed service. Channels may be used at either nodal or subscriber station locations for transmit or receive but must be coordinated with adjacent channel and adjacent area users in accordance with the provisions of Section 101.509 of this subpart. Stations also must comply with international coordination agreements.

Channel No.	Nodal station frequency band (MHz) limits	User station frequency band (MHz) limits
25.....	18,820-18,830	19,160-19,170
26.....	18,830-18,840	19,170-19,180
27.....	18,840-18,850	19,180-19,190

28.....	18,850-18,860	19,190-19,200
29.....	18,860-18,870	19,200-19,210
30.....	18,870-18,880	19,210-19,220
31.....	18,880-18,890	19,220-19,230
32.....	18,890-18,900	19,230-19,240
33.....	18,900-18,910	19,240-19,250
34.....	18,910-18,920	19,250-19,260
35.....	24,250-24,290	25,050-25,090
36.....	24,290-24,330	25,090-25,130
37.....	24,330-24,370	25,130-25,170
38.....	24,370-24,410	25,170-25,210
39.....	24,410-24,450	25,210-25,250

(10) *Special provision for low power systems in the 17,700-19,700 MHz band:* Notwithstanding other provisions in Part 101 and except for specified areas around Washington, D.C., and Denver, Colorado, licensees of point-to-multipoint channel pairs 25-29 identified in paragraph (r)(9) of this section may continue to operate in accordance with the requirements of section 101.85 and may operate multiple low power transmitting devices within a defined service area. Operations are prohibited within 55 km when used outdoor and within 20 km when used indoor of the coordinates 38 deg.48' N/76 deg.52' W (Washington, D.C. area) and 39 deg.43' N/104 deg.46' W (Denver, Colorado area). The service area will be a 28 kilometer omnidirectional radius originating from specified center reference coordinates. The specified center coordinates must be no closer than 56 kilometers from any co-channel nodal station or the specified center coordinates of another co-channel system. Applicants/licensees do not need to specify the location of each individual transmitting device operating within their defined service areas. Such operations are subject to the following requirements on the low power transmitting devices:

- (i) Power must not exceed one watt EIRP and 100 milliwatts transmitter output power;
- (ii) A frequency tolerance of 0.001% must be maintained; and
- (iii) The mean power of emissions shall be attenuated in accordance with the following schedule:
 - (A) In any 4 kHz band, the center frequency of which is removed from the center frequency of the assigned channel by more than 50 percent of the channel bandwidth and is within the bands 18,820-18870 MHz or 19,19160-19,210 MHz:

$$A = 35 + .003(F - 0.5B) \text{ dB}$$

or,

80 dB (whichever is the lesser attenuation).

Where

A = Attenuation (in decibels) below output power level contained within the channel for a given polarization.

B = Bandwidth of channel in kHz.

F = Absolute value of the difference between the center frequency of the 4 kHz band measured at the center frequency of the channel in kHz.

(B) In any 4 kHz band the center frequency of which is outside the bands 18.820-18.870 GHz: At least $43 + 10 \log P$ (mean output power in watts) decibels.

(iv) Low power stations authorized in the band 18.8-19.3 GHz after June 8, 2000, are restricted to indoor use only.

* * * * *

3. Section 101.603 is amended by revising paragraphs (a)(2) and (b)(3) to read as follows:

§ 101.603 Frequency assignments.

(a) * * * * *

(2) In the frequency bands 6425-6525 MHz, 17,800-18,580 MHz, and on frequencies above 21,200 MHz, licensees may deliver any of their own products and services to any receiving location;

* * * * *

(b) * * * * *

(3) Be used to provide the final RF link in the chain of transmission of program material to cable television systems, multipoint distribution systems or master antenna TV systems, except in the frequency bands 6425-6525 MHz and 17,800-18,580 MHz and on frequencies above 21,200 MHz.

APPENDIX D**Initial Regulatory Flexibility Analysis**

1. As required by the Regulatory Flexibility Act (RFA),³³ the Commission has prepared an Initial Regulatory Flexibility Analysis (“IRFA”) of the possible economic impact on small entities of the policies and rules proposed in this *Notice of Proposed Rulemaking* (“Notice”).³⁴ 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*. The Commission will send a copy of the *Notice*, including the IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (“SBA”).³⁵ In addition, the *Notice* and IRFA (or summaries thereof) will be published in the Federal Register.³⁶

A. Need for and objectives of the proposed rule.

2. The Commission undertook this rulemaking proceeding to rechannelize that portion of the 17.7-19.7 GHz (18 GHz) band that is now designated as either exclusively primary or co-primary for the terrestrial fixed service (“FS”), in order to accommodate the licensees who need to relocate and to suit the needs of those who seek narrow bandwidth channels. Our proposed actions in this proceeding will also create more efficient use of the remaining FS spectrum and help to increase spectrum availability for new licensees.

3. Specifically, we propose a band plan for the FS paired and unpaired spectrum from 17.7-18.3 GHz and 19.3-19.7 GHz consisting of a variety of channel bandwidths (including narrower bandwidths and those of thirty and fifty megahertz) and a block of unpaired spectrum from 17.7-17.74 GHz. We also propose to designate a contiguous 500 megahertz block of one-way spectrum from 17.8-18.3 GHz for use by multichannel video programming distributors (“MVPDs”). We propose to give MVPD and private cable operator (“PCO”) licensees flexibility within such block to determine the appropriate bandwidth for their operations.

B. Legal basis.

4. 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).

³³ See 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. §§ 601 *et. seq.*, has been amended by the Contract with America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (“CWAA”). Title II of the CWAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (“SBREFA”).

³⁴ We also note that we could certify this action under 5 U.S.C. § 605, given that the rules and policies proposed herein are deregulatory.

³⁵ 5 U.S.C. § 603(a).

³⁶ *Id.*

C. Description and estimate of the number of small entities to which the proposed rules will apply.

5. The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted.³⁷ The RFA defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."³⁸ In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.³⁹ A small business concern is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration.⁴⁰

6. **Small Businesses.** Nationwide, there are a total of 22.4 million small businesses, according to SBA data.⁴¹

7. **Small Organizations.** Nationwide, there are approximately 1.6 million small organizations.⁴²

8. **Small Governmental Jurisdictions.** The term "small governmental jurisdiction" is defined as "governments of cities, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand."⁴³ As of 1997, there were approximately 87,453 governmental jurisdictions in the United States.⁴⁴ This number includes 39,044 county governments, municipalities, and townships, of which 37,546 (approximately 96.2%) have populations of fewer than 50,000, and of which 1,498 have populations of 50,000 or more. Thus, we estimate the number of small governmental jurisdictions overall to be 84,098 or fewer.

9. The proposed rechannelization would affect all common carrier⁴⁵ and private operational fixed⁴⁶ microwave licensees who are authorized under Part 101 of the Commission's Rules for use of the 18 GHz spectrum.

³⁷ 5 U.S.C. § 603(b)(3).

³⁸ 5 U.S.C. § 601(6).

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

⁴⁰ Small Business Act, 15 U.S.C. § 632 (1996).

⁴¹ See SBA, Programs and Services, SBA Pamphlet No. CO-0028, at page 40 (July 2002).

⁴² Independent Sector, The New Nonprofit Almanac & Desk Reference (2002).

⁴³ 5 U.S.C. § 601(5).

⁴⁴ U.S. Census Bureau, Statistical Abstract of the United States: 2000, Section 9, pages 299-300, Tables 490 and 492.

⁴⁵ See 47 C.F.R. §§ 101, et seq. (formerly Part 21 of the Commission's Rules) for common carrier fixed microwave services (except Multipoint Distribution Service).

Fixed Microwave Services. The Commission has not created a size standard for a small business specifically with respect to fixed microwave services. For purposes of this analysis, the Commission uses the SBA size standard for the category "Cellular and Other Telecommunications," which is 1,500 or fewer employees.⁴⁷ The Commission does not have data specifying the number of these licensees that have more than 1,500 employees, and thus is unable at this time to estimate with greater precision the number of fixed microwave service licensees that would qualify as small business concerns under the SBA's small business size standard. Consequently, the Commission estimates that there are up to 22,015 common carrier fixed microwave licensees and up to 61,670 private operational-fixed microwave licensees and broadcast auxiliary radio licensees in the microwave services that may be small and may be affected by the rules and policies adopted herein. We note, however, that the common carrier microwave fixed licensee category includes some large entities.

10. Other proposed rule changes would affect PCOs and other MVPDs. Below, we further describe and estimate the number of small entity licensees and regulatees that may be affected by these rules.

Cable and Other Program Distribution. This category includes cable systems operators, closed circuit television services, direct broadcast satellite services, multipoint distribution systems, satellite master antenna systems, and subscription television services. The SBA has developed small business size standard for this census category, which includes all such companies generating \$12.5 million or less in revenue annually.⁴⁸ According to Census Bureau data for 1997, there were a total of 1,311 firms in this category, total, that had operated for the entire year.⁴⁹ Of this total, 1,180 firms had annual receipts of under \$10 million and an additional 52 firms had receipts of \$10 million or more but less than \$25 million. Consequently, the Commission estimates that the majority of providers in this service category are small businesses that may be affected by the rules and policies proposed herein.

Cable System Operators (Rate Regulation Standard). The Commission has developed its own small business size standard for cable system operators, for purposes of rate regulation. Under the Commission's rules, a "small cable company" is one serving fewer than 400,000 subscribers nationwide.⁵⁰ The most recent estimates indicate that there were 1,439 cable operators who qualified as small cable system operators at the end of 1995.⁵¹ Since then, some of those companies may have grown to serve over 400,000 subscribers, and others may have been involved in transactions that caused them to be combined with other cable operators. Consequently, the Commission estimates that

⁴⁶ Persons eligible under Parts 80 and 90 of the Commission's rules can use Private Operational-Fixed Microwave services. See 47 CFR Parts 80 and 90. Stations in this service are called operational-fixed to distinguish them from common carrier and public fixed stations. Only the licensee may use the operational-fixed station, and only for communications related to the licensee's commercial, industrial, or safety operations.

⁴⁷ 13 C.F.R. § 121.201, NAICS codes 513322 (changed to 517212 in October of 2002).

⁴⁸ 13 CFR § 121.201, NAICS code 513220 (changed to 517510 in October 2002).

⁴⁹ U.S. Census Bureau, 1997 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization)", Table 4, NAICS code 513220 (issued October 2000).

⁵⁰ 47 CFR § 76.901(e). The Commission developed this definition based on its determination that a small cable system operator is one with annual revenues of \$100 million or less. Implementation of Sections of the 1992 Cable Act: Rate Regulation, *Sixth Report and Order and Eleventh Order on Reconsideration*, 10 FCC Rcd 7393 (1995), 60 FR 10534 (February 27, 1995).

⁵¹ Paul Kagan Associates, Inc., Cable TV Investor, February 29, 1996 (based on figures for December 30, 1995).

there are now fewer than 1,439 small entity cable system operators that may be affected by the rules and policies proposed herein.

Cable System Operators (Telecom Act Standard). The Communications Act of 1934, as amended, also contains a size standard for small cable system operators, which is “a cable operator that, directly or through an affiliate, serves in the aggregate fewer than 1 percent of all subscribers in the United States and is not affiliated with any entity or entities whose gross annual revenues in the aggregate exceed \$250,000,000.”⁵² The Commission has determined that there are 67,700,000 subscribers in the United States.⁵³ Therefore, an operator serving fewer than 677,000 subscribers shall be deemed a small operator, if its annual revenues, when combined with the total annual revenues of all its affiliates, do not exceed \$250 million in the aggregate.⁵⁴ Based on available data, the Commission estimates that the number of cable operators serving 677,000 subscribers or fewer, totals 1,450.⁵⁵ The Commission neither requests nor collects information on whether cable system operators are affiliated with entities whose gross annual revenues exceed \$250 million,⁵⁶ and therefore are unable, at this time, to estimate more accurately the number of cable system operators that would qualify as small cable operators under the size standard contained in the Communications Act of 1934.

Multipoint Distribution Service, Multichannel Multipoint Distribution Service, and Instructional Television Fixed Service. Multichannel Multipoint Distribution Service (MMDS) systems, often referred to as “wireless cable,” transmit video programming to subscribers using the microwave frequencies of the Multipoint Distribution Service (MDS) and Instructional Television Fixed Service (ITFS).⁵⁷ In connection with the 1996 MDS auction, the Commission defined “small business” as an entity that, together with its affiliates, has average gross annual revenues that are not more than \$40 million for the preceding three calendar years.⁵⁸ The SBA has approved of this standard.⁵⁹ The MDS auction resulted in 67 successful bidders obtaining licensing opportunities for 493 Basic Trading Areas

⁵² 47 U.S.C. § 543(m)(2).

⁵³ See FCC Announces New Subscriber Count for the Definition of Small Cable Operator, *Public Notice*, DA 01-158 (January 24, 2001).

⁵⁴ 47 CFR § 76.901(f).

⁵⁵ See FCC Announces New Subscriber Count for the Definition of Small Cable Operators, *Public Notice*, DA-01-0158 (released January 24, 2001).

⁵⁶ The Commission does receive such information on a case-by-case basis if a cable operator appeals a local franchise authority’s finding that the operator does not qualify as a small cable operator pursuant to § 76.901(f) of the Commission’s rules. See 47 CFR § 76.909(b).

⁵⁷ Amendment of Parts 21 and 74 of the Commission’s Rules with Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service and Implementation of Section 309(j) of the Communications Act – Competitive Bidding, *Report and Order*, 10 FCC Rcd 9589, 9593, para. 7 (1995) (MDS Auction R&O).

⁵⁸ 47 C.F.R. § 21.961(b)(1).

⁵⁹ See Letter to Margaret Wiener, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Bureau, from Gary Jackson, Assistant Administrator for Size Standards, Small Business Administration, dated March 20, 2003 (noting approval of \$40 million size standard for MDS auction).

(BTAs).⁶⁰ Of the 67 auction winners, 61 claimed status as a small business. At this time, we estimate that of the 61 small business MDS auction winners, 48 remain small business licensees. In addition to the 48 small businesses that hold BTA authorizations, there are approximately 392 incumbent MDS licensees that have gross revenues that are not more than \$40 million and are thus considered small entities.⁶¹

Satellite Master Antenna Television (“SMATV”) Systems. The SBA definition of small entities for cable and other program distribution services includes SMATV services and, thus, small entities are defined as all such companies generating \$12.5 million or less in annual receipts.⁶² Industry sources estimate that approximately 5,200 SMATV operators were providing service as of December 1995.⁶³ Other estimates indicate that SMATV operators serve approximately 1.5 million residential subscribers as of July 2001.⁶⁴ The best available estimates indicate that the largest SMATV operators serve between 15,000 and 55,000 subscribers each. Most SMATV operators serve approximately 3,000-4,000 customers. Because these operators are not rate regulated, they are not required to file financial data with the Commission. Furthermore, we are not aware of any privately published financial information regarding these operators. Based on the estimated number of operators and the estimated number of units served by the largest ten SMATVs, we believe that a substantial number of SMATV operators qualify as small entities.

Open Video Services. Open Video Service (OVS) systems provide subscription services.⁶⁵ The SBA has created a small business size standard for Cable and Other Program Distribution.⁶⁶ This standard provides that a small entity is one with \$12.5 million or less in annual receipts. The Commission has certified approximately 25 OVS operators to serve 75 areas, and some of these are currently providing service.⁶⁷ Affiliates of Residential Communications Network, Inc. (RCN) received approval to operate OVS systems in New York City, Boston, Washington, D.C., and other areas. RCN has sufficient revenues to assure that they do not qualify as a small business entity. Little financial information is available for the other entities that are authorized to provide OVS and are not yet operational. Given that some entities authorized to provide OVS service have not yet begun to generate revenues, the Commission concludes that up to 24 OVS operators (those remaining) might qualify as small businesses that may be affected by the rules and policies proposed herein.

⁶⁰ Basic Trading Areas (BTAs) were designed by Rand McNally and are the geographic areas by which MDS was auctioned and authorized. *See* MDS Auction R&O, 10 FCC Rcd at 9608, para. 34.

⁶¹ 47 U.S.C. § 309(j). Hundreds of stations were licensed to incumbent MDS licensees prior to implementation of Section 309(j) of the Communications Act of 1934, 47 U.S.C. § 309(j). For these pre-auction licenses, the applicable standard is SBA’s small business size standard for “other telecommunications” (annual receipts of \$12.5 million or less). *See* 13 C.F.R. § 121.201, NAICS code 517910.

⁶² 13 C.F.R. § 121.201 (NAICS Code 513220).

⁶³ *See Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming*, 12 FCC Rcd 4358, 4403-04 (1996)

⁶⁴ *See Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming*, 17 FCC Rcd 1244, 1281 (2001).

⁶⁵ *See* 47 U.S.C. § 573.

⁶⁶ 13 CFR § 121.201, NAICS code 513220 (changed to 517510 in October 2002).

⁶⁷ *See* <http://www.fcc.gov/csb/ovs/csovsccer.html> (current as of March 2002).

D. Description of projected reporting, recordkeeping, and other compliance requirements.

11. Under the proposal contained in the *Notice*, we are effecting a change wherein we will allow 18 GHz applicants to propose to operate on spectrum utilizing different bandwidth channels in addition to the ones already in existence. The proposal does not include any changes in the language of FCC Forms nor does it require extra filings. We are also allowing certain flexibility for some modifications to be achieved without the necessity of filing any applications.

E. Steps taken to minimize significant economic impact on small entities, and significant alternatives considered:

12. The RFA requires an agency to describe any significant, specifically small business, alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): “(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.”⁶⁸

13. We note that, although we decline to grant a blanket waiver to accommodate licensees needing an immediate switch to channels of sizes not currently available, we will consider granting waivers as appropriate where applicants have met the conditions stated in paragraph 16 herein. This will assist all such licensees, and especially small entity licensees, that need less bandwidth than is currently provided.

14. We are attempting to reduce a regulatory burden. We will continue to examine alternatives in the future with the objective of eliminating unnecessary regulations and minimizing any significant impact on small entities. We seek comment on significant alternatives commenters believe we should adopt.

F. Federal rules that overlap, duplicate, or conflict with these proposed rules.

15. None.

⁶⁸ 5 U.S.C. § 603(c)(1)-(c)(4).