

ORIGINAL

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)
)
Amendment of Parts 21 and 74 to Enable) MM Docket No. 97-217
Multipoint Distribution Service and)
Instructional Television Fixed Service) File No. RM-9060
Licenses to Engage in Fixed)
Two-way Transmissions)

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 FEDERAL COMMUNICATIONS COMMISSION
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PETITION FOR FURTHER RECONSIDERATION

Paul J. Sinderbrand
 William W. Huber
 Wilkinson Barker Knauer, LLP
 2300 N Street, NW, Suite 700
 Washington, DC 20037-1128
 202.783.4141
 Counsel to the Petitioners

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EXECUTIVE SUMMARY

A handful of revisions to the Commission's new MDS and ITFS flexible use rules remain necessary to avoid unintended, but serious, adverse consequences from the Commission's *Report and Order on Reconsideration* (the "*Reconsideration Order*").

First, the Petitioners urge the Commission to reconsider its decision to require licensees filing applications for response station hubs, boosters and other facility modifications during the first filing window to protect low-power booster service areas ("BSAs") specified in notifications submitted prior to the first filing window. Because of the inherent difficulty of protecting low-power BSAs, affording low-power BSAs protection prior to the first filing window will have a highly preclusive impact on the ability of neighboring MDS and ITFS licensees to take advantage of the flexibility afforded under the new rules. Throughout this proceeding, the Commission has strived to develop an application processing system that places all facilities on an equal footing, an approach designed to promote cooperation between neighboring systems. Consistent with that approach, the Commission should defer BSA protection for low-power boosters until after the first filing window, just as it is doing for high-power boosters.

Second, the Commission should revisit its policies regarding the grandfathering of ITFS leases, and rule that those leases that provide for an automatic renewal after March 31, 1997 unless a party affirmatively acts to terminate the agreement are grandfathered from complying with the new leasing rules. While granting a similar request from other petitioners, the *Reconsideration Order* denied Petitioners' unopposed request for this relief because of concerns that ITFS licensees could avoid compliance with the new rules in perpetuity. However, because the leases in question are all limited to a total term of ten years (including the initial term and all renewals), the concerns expressed in the *Reconsideration Order* are without basis.

Third, the Commission should revise its rules to eliminate any ambiguity as to the number of response stations that can transmit simultaneously in those situations where the licensee subchannelizes its spectrum after receiving its initial authorization. Under the Commission's rules, a response station hub application will specify the maximum number of response station transmitters of a given class that can be operated simultaneously over a given channel within a given sector, and a licensee is required to comply with that limit. Where a response station hub licensee subsequently exercises its right to subchannelize pursuant to Section 21.909(a) or 74.939(a) and limits the maximum EIRP emitted by any individual response station proportionately to the fraction of the channel that the response station occupies, the licensee should be permitted under Sections 21.909(g)(6) or 74.939(g)(6) to operate simultaneously on each subchannel the number of response stations specified in the license. Such an approach is necessary to provide hub licensees the flexibility to freely subchannelize, while at the same time it protects neighboring facilities by maintaining the power spectral density at the level initially authorized by the Commission.

Fourth, where boosters serve geographic portions of the ITFS protected service area ("PSA") in which the ITFS licensee has no educational mission, the capacity of that booster should be leasable even if no educational usage is made of the booster, subject to compliance with the Commission's reservation rules and the rule requiring 5% of digital ITFS stations to remain

unleased. Otherwise, commercial operators will find it difficult to fully serve the PSA, since they will be unable to lease capacity on boosters constructed in areas that may be within the PSA, but are outside the area in which the ITFS licensee has an educational mission.

Fifth, the Commission's new rules regarding channel shifting need to be revised to reflect the text of the *Reconsideration Order*. In the *Reconsideration Order*, the Commission decided to "permit channel shifting and channel swapping among MDS and ITFS licensees without regard to whether the entities at issue employ digital technology or lease to a lessee using digital technology." However, the revised rules still do not permit an ITFS licensee to engage in channel shifting if it is engaged in analog transmissions and does not lease excess capacity for digital use. That oversight should now be corrected.

Finally, the current language of the channel swapping rule only allows channel swapping with another "licensee or conditional licensee in the same system." The "in the same system" restriction unnecessarily prevents channel swaps between unaffiliated licensees that could otherwise promote the most efficient use of the spectrum. Particularly since channel swaps are entirely voluntary, there is no valid public interest rationale for preventing channel swaps by licensees who are not "in the same system."

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PETITION FOR FURTHER RECONSIDERATION

The over 110 wireless communications system operators, Commission licensees, equipment manufacturers and consultants who were parties to the Petition for Rulemaking that commenced this proceeding (collectively, the “Petitioners”), by their attorneys and pursuant to Section 1.429(a) of the Commission’s Rules, hereby petition the Commission to reconsider certain aspects of the *Report and Order on Reconsideration* (the “*Reconsideration Order*”).^{1/}

I. INTRODUCTION.

With the *Report and Order* (the “*R&O*”)^{2/} and the *Reconsideration Order* in this proceeding, the Commission has made dramatic strides towards promoting the use of Multipoint Distribution Service (“MDS”) and Instructional Television Fixed Service (“ITFS”) spectrum for innovative

^{1/} See *Amendment of Parts 1, 21 and 74 to Enable Multipoint Distribution Service And Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions; Request for Declaratory Ruling on the Use of Digital Modulation by Multipoint Distribution Service and Instructional Television Fixed Service Stations*, FCC 99-178, MM Docket No. 99-178 (rel. July 29, 1999) [hereinafter cited as “*Reconsideration Order*”]. A listing of the Petitioners was included as Appendix A to the *Reconsideration Order*.

^{2/} See *Amendment of Parts 21 and 74 to Enable Multipoint Distribution Service And Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions*, 13 FCC Rcd 19112 (1998) [hereinafter cited as “*R&O*”].

digital video, voice and data services. The Petitioners applaud the Commission's efforts so far. However, the Commission's work is not quite done. As the Commission lays the groundwork for MDS and ITFS licensees to deploy advanced telecommunications facilities, a handful of revisions to the rules and policies are still required both to avoid unintended, but serious, adverse consequences from revisions made in the *Reconsideration Order* and to address other matters that were overlooked in the crafting of the *Reconsideration Order*. Indeed, the adverse impact of two provisions of the *Reconsideration Order* – that requiring applicants in the first filing window to protect newly-authorized low-power booster service areas (“BSAs”) for which notifications are filed prior to the first window, and that requiring certain excess capacity lease agreements to be amended within fifteen days of the publication of the *Reconsideration Order* in the *Federal Register* (which occurred yesterday) – are so substantial that the Petitioners are submitting simultaneously herewith a request pursuant to Section 1.429(k) of the Rules for a stay of those requirements pending action on this petition.

II. DISCUSSION.

A. A SUCCESSFUL TRANSITION TO TWO-WAY SERVICE REQUIRES THE COMMISSION TO DEFER BOOSTER SERVICE AREA INTERFERENCE PROTECTION FOR LOW-POWER BOOSTERS UNTIL AFTER THE INITIAL FILING WINDOW.

If the Commission does nothing else in response to this filing, the Petitioners urge the Commission to reconsider and reverse the decision to require those MDS and ITFS licensees filing applications for response station hubs, high-power boosters or other facility modifications during the first filing window to protect BSAs specified in low-power booster notifications submitted before

the first filing window.^{3/} The Petitioners do not object to allowing licensees to submit low-power booster notifications (including BSA specifications) prior to the inaugural filing window; indeed, licensees must be able to submit such notifications in order to utilize low-power boosters during the period leading up to the initial filing window. However, the Petitioners believe that requiring those submitting applications for response station hubs, boosters and other facility modifications during the initial window to protect low-power BSAs affords those installing such boosters prior to the first filing window an unwarranted advantage over their neighbors, an advantage that can be abused to undermine the objectives of this proceeding.

Consistent with the Commission's determination that flexible use of the MDS and ITFS spectrum best serves the public interest, the rules and policies adopted in this proceeding generally have been designed so as to not favor any one particular type of facility over any other. In addition, the *R&O* and the *Reconsideration Order* generally have sought to promulgate rules that expedite the licensing of facilities by relying on neighboring licensees to coordinate their proposed usages. For example, if one licensee applies to increase the power of its single-site downstream video transmission system at the same time its neighbor proposes to add response station hubs for a cellularized two-way Internet access service, both applications will be granted and, to the extent that the proposed facilities will interfere with each other, the licensees will be left to develop a resolution. As the *R&O* recognized, "[b]ecause parties will be unable to offer reliable service without resolving

^{3/} *Reconsideration Order*, at ¶ 65.

such conflicts, we believe the incentive to reach a resolution will be so great that Commission involvement will be unnecessary to resolve disputes.”^{4/}

Unfortunately, it was not until after the *R&O* was released that questions were raised as to what sort of interference protection would be afforded low-power boosters during the first window. In its Consolidated Opposition to several petitions for reconsideration of the *R&O*, the Petitioners first raised the issue, stating:

C&W Enterprises, Inc. also calls upon the Commission to issue a “clarification” that booster stations licensed under the prior rules will be permitted to continue to operate without securing a new license upon the effective date of the new rules. *See id.* While the Petitioners believe that the rules clearly permit the licensee of a booster to continue to operate upon the effective date of the new rules, they have no objection to the issuance of such a “clarification.” At the same time, the Commission should make clear that those boosters licensed under the old regime are not entitled to protection within a booster service area (“BSA”) at this juncture. The Petitioners propose that in order to secure a BSA, a booster licensee should be required to file a notification during the first filing window which sets forth the information specified in newly-adopted Sections 21.913(b)(4) - (6), 21.913(e)(1) - (3), 74.985(b)(2), (3) and (6) or 74.985(e)(1) - (3), as appropriate. A BSA proposed during this window will not be entitled to protection *vis a vis* applications proposed during the window, but will be entitled to protection against subsequent proposals.^{5/}

Significantly, no party objected to the Petitioners’ proposal. However, while the *Reconsideration Order* agreed with the Petitioners with respect to the handling of high-power boosters, it rejected the Petitioners’ approach as to low-power boosters.^{6/} The Commission reasoned that “our Rules, both current and impending, entail that notification of the construction of a low-

^{4/} *R&O*, 13 FCC Rcd at 19148.

^{5/} *See Consolidated Opposition of Petitioners*, MM Docket No. 97-217, at 2, n. 6 (filed Feb. 4, 1999) [hereinafter cited as “Consolidated Opposition”].

^{6/} *See Reconsideration Order*, at ¶ 64-65.

power booster is not relegated to a filing window nor subject to our new streamlined application processing procedures.”^{7/} While that is certainly true, nonetheless, the Petitioners respectfully submit that the public interest would best be served by deferring any interference protection afforded low-power BSAs until after the completion of the first filing window.

It is important to note that the Petitioners are not suggesting that low-power boosters should go entirely without protection. In discussing its decision not to permit existing high-power boosters to secure BSAs until after the initial window, the Commission noted that “[w]hile we agree that currently-licensed high-power boosters may not establish BSAs until the initial filing window, it does not follow that they are left completely unprotected against subsequent applications, including those filed in the initial window; after all, most still will benefit at least to some degree from the protection accorded the psa or Basic Trading Area (“BTA”) in which they are located.”^{8/} The same is certainly true with respect to low-power boosters -- while the Petitioners do not believe that low-power boosters should receive BSA protection during the first window, such boosters will still receive protection under the protected service area of their primary stations.

The problem, in a nutshell, is that low-power booster BSAs can be particularly difficult to protect against interference. This is true because low-power boosters are often cross-polarized relative to their main transmitter in order to minimize intra-system co-channel interference. Since the main transmission antennas of neighboring systems are, by and large, cross-polarized relative to each other in order to minimize inter-system interference, the net result of cross-polarizing the

^{7/} *Id.* at ¶ 64.

^{8/} *Id.* at ¶ 65.

low-power booster is that it is co-polarized relative to the neighboring system. So, if low-power BSA protection is required in the first window, when the neighbor attempts to apply for a response station hub, booster or other facility modification in the first window, the neighbor will have the difficult task of meeting the 45 dB D/U co-channel requirement under circumstances where the usual 20 dB of cross-polarization discrimination is not available.

In short, regardless of whether a low-power booster is installed for legitimate reasons or merely to frustrate a neighbor's ability to take advantage of the Commission's new flexible use rules (and the low cost of low-power boosters makes it possible that some licensees will deploy them merely for greenmail), the fact remains that the BSAs of low-power boosters can be highly-preclusive of the ability of neighbors to deploy response station hubs, boosters or other facility modifications. By requiring applicants in the first window to protect new low-power BSAs, the Commission does violence to the dual philosophies of this proceeding that no particular type of facility is to be preferred over any other, and that neighboring licensees should be coordinating their usage. By allowing low-power notifications to be filed prior to the first window, but not entitling the specified BSA to interference protection until after the window, the Commission can level the playing field for all and promote the desired coordination between neighbors.

B. THE COMMISSION SHOULD GRANDFATHER ITFS LEASES ENTERED INTO PRIOR TO MARCH 31, 1997 THAT CONTAIN AUTOMATIC RENEWAL PROVISIONS EFFECTIVE AFTER MARCH 31, 1997.

Throughout this proceeding, the Commission has been urged to allow pre-existing ITFS excess capacity leases to run their course, even if they do not fully comply with the new rules and policies. In the *R&O*, the Commission addressed these requests as follows:

We seek to ensure a transition as smooth as possible to two-way operations, and we believe that effectively requiring amendment of numerous existing leases could prove unduly burdensome to ITFS licensees and wireless cable operators who did not anticipate such changes. In this regard, we are persuaded by commenters who describe how having to go back and renegotiate excess capacity agreements will require ITFS licensees to make other concessions that may seriously undermine their expectations and damage their ability to provide educational services. However, since the March 31, 1997 release of our Public Notice announcing the filing of the petition for rulemaking which initiated this proceeding, no party can be heard to argue that it did not have notice that ITFS/MDS two-way operations were anticipated in the not-too-distant future. Thus, any excess capacity lease entered into, renewed, or extended after March 31, 1997 is expected to be brought into compliance immediately with all of the rule changes and policies that are adopted here, as is each new such lease, renewal, or term extension from here onward.^{9/}

The requirement that any lease “entered into, renewed, or extended after March 31, 1997” be immediately amended proved problematic. On reconsideration, the Catholic Television Network (“CTN”) urged the Commission to declare that leases which provided for automatic renewal should the Commission extend the maximum excess capacity lease term (which it did in the post-March 31, 1997 *R&O*) should be grandfathered.^{10/} The Petitioners concurred with that proposal, while urging “[a]long similar lines, the Commission should clarify that a lease that is otherwise “grandfathered” does not lose that status because it includes a provision under which the lease is automatically renewed after March 31, 1997 unless a party affirmatively terminates the lease or the Commission fails to renew the ITFS license.”^{11/}

The Commission granted CTN’s request, explaining that:

^{9/} *R&O*, 13 FCC Rcd at 19182 (footnotes omitted).

^{10/} See Petition of Catholic Television Network for Reconsideration and Clarification, MM Docket No. 97-217, at 20-21 (filed Dec. 28, 1998).

^{11/} See Consolidated Opposition, at 12, n. 37.

Extending the grandfathered status of leases in these circumstances by five additional years allows the parties to continue to realize the benefits of the bargains that they originally negotiated at a time when two-way operations were not factored into the equation, yet ensures that successor leases will comply with the rules that we adopted in the *Two-Way Order* within a reasonable time frame.^{12/}

Although that logic would appear equally applicable to the circumstances raised by the Petitioners, the Commission denied Petitioner's request on the grounds that "Petitioner's request theoretically could yield a result where a lease may avoid compliance with the new rules into perpetuity," controverting the intent of the new rules.^{13/} Unfortunately, the assumption underlying the Commission's analysis – that the lease provisions in issue could result in renewals in perpetuity – is incorrect.

Prior to the adoption of the *R&O*, the Commission's policy was to restrict the total term of any excess capacity lease, including renewal terms that would automatically go into effect unless a party affirmatively terminated the agreement, to no more than 10 years.^{14/} The leases the Petitioners desire to have "grandfathered" are those pre-March 31, 1997 agreements that provide for an initial term and automatic renewal terms that total no more than 10 years. For example, it is not

^{12/} *Reconsideration Order*, at ¶ 59.

^{13/} *Id.* at ¶ 60.

^{14/} See, e.g. *Johnson Brock Public School*, 12 FCC Rcd 11789, 11791(1997); *East Bernard Independent School District*, 8 FCC Rcd 4000, 4001 (1993); *Brazosport Junior College*, 8 FCC Rcd 3163, 3164 (1993); *Meyersville School District*, 8 FCC Rcd 440, 441 (1993); *Wharton Independent School District*, 8 FCC Rcd 666, 667 (1993); *Van Vleck Independent School District*, 7 FCC Rcd 7231, 7233 (1992); *Amendment of Parts 21, 43, 74, 78 and 94 of the Commission's Rules Governing Use of the Frequencies in the 2.1 and 2.5 GHz Bands Affecting: Private Operational-Fixed Microwave Service, Multipoint Distribution Service, Multichannel Multipoint Distribution Service, Instructional Television Fixed Service, and Cable Television Relay Service*, 5 FCC Rcd 6410, 6416 (1990).

uncommon for ITFS excess capacity leases to provide for an initial term of five years and a five year renewal term that goes into effect unless a party affirmatively terminates the agreement. All the Petitioners are asking is for the Commission to “grandfather” these ten year leases in circumstances where an automatic renewal occurs after March 31, 1997. As with the leases that were the subject of CTN’s request – those automatically extended after March 31, 1997 to fifteen year terms by virtue of the change in the maximum term – “grandfathering” leases that automatically renewed after March 31, 1997 will assure the parties thereto the full benefit of bargains struck prior to the inauguration of the two-way era.

C. THE COMMISSION SHOULD CLARIFY THAT A RESPONSE STATION HUB LICENSEE THAT SUBCHANNELIZES AND LIMITS THE EIRP OF EACH RESPONSE STATION PROPORTIONATELY MAY SIMULTANEOUSLY OPERATE ON EACH SUBCHANNEL THE NUMBER OF RESPONSE STATION TRANSMITTERS SPECIFIED IN ITS INITIAL APPLICATION .

During informal discussions within the industry and with members of the Commission’s staff, it has become evident that there is some confusion as to the interplay between Sections 21.909(a) and 74.939(a) of the Rules, which allow MDS and ITFS licensees to freely subchannelize their authorized response station spectrum, and Sections 21.909(g)(6) and 74.939(g)(6) of the Rules, which limit the number of MDS and ITFS response station transmitters of a given class within a given sector that can transmit simultaneously at any given time.

Under both Sections 21.909 and 74.939, an applicant for a response station hub must demonstrate that the cumulative impact of the proposed number of simultaneously-operating transmitters of the various proposed classes in the various proposed regions will not cause harmful interference to neighboring facilities. To assure the requisite protection, Sections 21.909(g)(6) and 74.939(g)(6) then provide that “[t]he response stations transmitting simultaneously at any time

within any given region of the response service area utilized for purposes of analyzing the potential for interference by response stations shall conform to the numerical limits for each class of response station proposed in the application for the response station hub license.” The confusion arises because Sections 21.909(g)(6) and 74.939(g)(6) do not specifically provide for an adjustment in the number of simultaneously-operating response stations where the licensee exercises its right under Sections 21.909(a) or 74.939(a) to subchannelize. Thus, if Sections 21.909(g)(6) and 74.939(g)(6) are read literally, it could be argued that even where a licensee subchannelizes and reduces the maximum EIRP of its response stations proportionately to the reduction in channel bandwidth, the maximum number of response stations that can be operated simultaneously remains static. The Petitioners do not believe that was the Commission’s intent, and therefore propose to amend Sections 21.909(g)(6) and 74.939(g)(6) to make clear that when a licensee does subchannelize pursuant to Sections 21.909(a) or 939(a) and limits the maximum EIRP emitted by any individual response station proportionately to the fraction of the channel that the response station occupies, the licensee may operate simultaneously on *each* subchannel the number of response stations specified in its initial interference analysis.

Adoption of the clarifying amendment proposed by the Petitioners will substantially reduce the filing burdens imposed on response station hub licensees and the Commission’s staff, without any risk of increasing the potential for interference to neighboring facilities. The fundamental philosophy underlying “Methods for Predicting Interference from Response Station Transmitters and to Response Station Hubs and for Supplying Data on Response Station Systems,” which is attached to the *Reconsideration Order* as Appendix D, is that the maximum number of response stations that can operate simultaneously is based upon the aggregate power spectral density of those response

stations. So long as the response station licensee that subchannelizes reduces the EIRP of the response stations in the same proportion as it reduces the operating bandwidth, there is no change in the aggregate power spectral density. Thus, adoption of the rule revisions proposed by the Petitioners would have no impact on the operating environment.

This is best illustrated by example. Assume a situation where an entire 6 MHz channel is dedicated to response station operation, there is one region, there is one class of response station (which has a maximum EIRP of 10 Watts), and the maximum number of response stations that can operate with the maximum EIRP of 10 Watts is calculated to be 50. The maximum power spectral density in such case is 500 W per 6 MHz channel. If the 6 MHz channel were divided into ten subchannels of 600 kHz each and the maximum EIRP reduced to one-tenth, or 1 W, then 50 response stations could operate simultaneously on each subchannel (for a total of 500 simultaneously-operating response stations) without any increase whatsoever in the 500 W per 6 MHz channel aggregate power spectral density. Of, if the 6 MHz channel were divided into twenty subchannels of 300 kHz each and the maximum EIRP reduced to one-twentieth, or $\frac{1}{2}$ W, then 50 response stations could operate simultaneously on each subchannel (for a total of 1000 simultaneously-operating response stations) without any increase whatsoever in the 500 W per 6 MHz channel aggregate power spectral density or the potential for interference.

As such, adoption of the Petitioners' approach would be fully consistent with the Commission's fundamental objective in permitting flexible channelization. In the *Report and Order* the Commission recognized that its new rules:

will permit licensees to both "statically" and "dynamically" choose the bandwidths in use at their stations. What we mean is that a licensee may configure its system so that the bandwidths in use at all of its stations are fixed and unchanging, *i.e.*, static,

or a licensee may configure its system so that, at one or more (or all) stations, the bandwidths in use are not fixed and may change rapidly over time, *i.e.*, dynamically. The advantage of such flexibility is that, on a real-time basis, a licensee or system operator can control and allocate bandwidth among its transmitters so as to optimize the efficiency and speed of information flow. For example, if a response station were located at a business site, a narrow bandwidth might be used one moment to send a short outgoing query and a wide bandwidth might be used the next moment (or an hour later) in order to respond to a request to upload the business' Internet home page resident on site. Different emissions/emitters might be used at the same station, depending on the type and volume of message flow and bandwidth requirements at any particular time, and simultaneous transmissions (*e.g.*, one narrowband and one wideband signal) could be used if needed. This form of flexibility is a natural outgrowth of the use of digital emissions and the fact that, *no matter what bandwidth is in use at a given moment, the power spectral density of the digitally transmitted signal per unit of bandwidth will be uniform and fixed.*^{15/}

The Commission's recognition that subchannelization results in a fixed power spectral density demonstrates that the Commission had no intention of unnecessarily limiting the number of simultaneously-transmitting response stations when subchannelization occurs in a manner that would significantly reduce aggregate power spectral density. To the contrary, the quoted language suggests that the Commission has intended all along for Sections 21.909(g)(6) and 74.939(g)(6) to be read in the manner reflected in the Petitioners' proposed amendments.

D. THE COMMISSION'S RULES SHOULD BE AMENDED TO ACCOMMODATE ITFS BOOSTER LICENSEES WHO DO NOT HAVE EDUCATIONAL RECEIVE SITES THROUGHOUT THEIR 35-MILE RADIUS PSA.

In their Petition for Reconsideration of the *R&O*, the Petitioners urged the Commission to exempt from the new minimum usage rules, but not from the new recapture and reservation rules, those ITFS booster stations serving geographic areas which are within the ITFS licensee's PSA, but

^{15/} See *R&O*, 13 FCC Rcd at 19121 (emphasis added).

outside the area in which the ITFS license has an educational mission.^{16/} However, the *Reconsideration Order* failed to address that request. For the reasons set forth below, the Petitioners urge the Commission to adopt the Petitioners' proposal at this juncture.

The benefits of the Petitioners' approach are best illustrated by example. Take a commercial system operator who desires to deploy boosters that will serve within the 35-mile radius PSA of a local school district that holds an ITFS licensee, but outside of the school district itself. A strict application of Sections 74.931(c) and (d), even as amended by the *Reconsideration Order*, would preclude such deployment because the ITFS licensee has no educational receive sites within the geographic area to be served by the booster and thus cannot make educational use of the spectrum. In such a case, Sections 74.931(c) and (d) would operate to inadvertently frustrate development of a broadband wireless system by restricting the deployment of boosters. In effect, the ITFS channels could not be used in those areas that are within the PSA (and thus unavailable to any other licensee), but outside of the licensee's educational service area.

To address this problem, the Commission should allow the leasing of excess capacity on boosters that serve geographic areas in which the ITFS licensee has no educational mission. However, in order to accommodate future expansion of that ITFS licensee's mission, the ITFS licensee should be required to: (a) if it is transmitting digitally, maintain a minimum of 5% of that booster's capacity for immediate use by the ITFS licensee, as well as the ability to ready recapture 20 hours per channel per week if the spectrum needed to do so exceeds the 5% reservation; or (b) if it is transmitting using analog modulation, maintain the ability to ready recapture at least 40 hours

^{16/} See Petition of Petitioners for Reconsideration, MM Docket No. 97-217, at 22 (filed Dec. 28, 1998).

per channel per week. In this fashion, the Commission can assure the maximum deployment of facilities without undue burdens on ITFS licensees, while assuring that ITFS licensees retain the capability of utilizing all boosters within their PSA for educational purposes should the need arise.

E. THE COMMISSION'S RULES REGARDING CHANNEL SHIFTING REQUIRE AMENDMENT TO ENSURE THAT THE RULES MATCH THE POLICY ANNOUNCED IN THE RECONSIDERATION ORDER.

In the *R&O*, the Commission adopted rules under which an ITFS licensee would only be permitted to engage in channel shifting if it utilized digital technology or leased excess capacity to a commercial system operator that utilized digital technology.^{17/} In response to several petitions for reconsideration urging that channel shifting be permitted by those ITFS licensees that neither use digital technology nor lease to an operator using digital technology, the Commission announced in the *Reconsideration Order* that:

Some parties have asked us to permit channel shifting by ITFS licensees that solely utilize analog transmissions and do not lease to an operator employing digital technology Those parties claim there is no reason to treat digital and analog systems differently in this respect. We agree with these parties and find that permitting such channel shifting . . . will further maximize the flexibility of the services and thereby benefit the public. Therefore, we will permit channel shifting and channel swapping among MDS and ITFS licensees without regard to whether the entities at issue employ digital technology or lease to a lessee using digital technology.^{18/}

Petitioners agree with the Commission's approach. However, in what appears to have been an inadvertent error, the Commission did not amend Section 74.931(c)(3) to reflect this policy. Specifically, while Section 74.931(d)(3) authorizes an ITFS licensee that utilizes digital transmission

^{17/} See *R&O*, 13 FCC Rcd at 19166.

^{18/} *Reconsideration Order*, at ¶ 57.

to engage in channel shifting, Section 74.931(c)(3) only authorizes an ITFS licensee that uses analog technology to engage in channel shifting if it “leases excess capacity to an operator which utilizes digital transmission on any one of the licensees licensed channels.”^{19/} To align Section 74.931(c) with the more flexible channel shifting policy adopted in the *Reconsideration Order*, Petitioners request the Commission simply amend the text of Section 74.931(c)(3) as suggested in Appendix A.

F. THE COMMISSION SHOULD PERMIT ITFS CHANNEL SWAPPING AMONG LICENSEES REGARDLESS OF WHETHER THEY ARE “IN THE SAME SYSTEM” IN ORDER TO MAXIMIZE OPERATOR FLEXIBILITY AND SPECTRAL EFFICIENCY.

At the same time the *Reconsideration Order* was extending the right to channel shift to all ITFS licensees that utilize analog technology, the Commission also announced that “we will permit . . . channel swapping among MDS and ITFS licensees without regard to whether the entities at issue employ digital technology or lease to a lessee using digital technology.”^{20/} However, in implementing that policy – one which the Petitioners wholeheartedly support – the Commission has retained a limitation on channel swapping that will unnecessarily restrict licensee flexibility and spectral efficiency.

Specifically, Section 74.902 limits channel swaps to licensees “in the same system.” While that term is not defined, it presumably means that swaps will only be permitted among licensees who are affiliated with a single wireless communications system that uses facilities licensed to multiple licensees. Undoubtedly, most channel swaps will occur between licensees who are operating as part

^{19/} *Id.* at App. C, ¶ 31.

^{20/} *Id.* at ¶ 57.

of a single system. However, neither the *Report and Order* nor the *Reconsideration Order* gave any reason for limiting swaps to just those licensees affiliated with a single system operator, and none is readily apparent. Indeed, retention of the limitation may preclude channel swaps that are clearly in the public interest.

The Commission has recognized that channel swapping will “maximize flexibility by greatly assisting operators in assembling the contiguous frequency blocks which are essential to a two-way architecture.”^{21/} For example, an operator may design its system so that all upstream transmissions are in the upper portion of the 2500-2690 MHz band. The G Group licensee in that market may elect not to convert its channels for upstream use, but would be willing to engage in a channel swap with other ITFS licensees who desire to convert channels for upstream use. If the G Group and the other licensees are affiliated with the same system operator, the swaps would be permitted under the existing rules. However, if the G Group licensee is not leasing excess capacity to the commercial operator in the market, but is nonetheless willing to relocate to different spectrum in order to accommodate the commercial operator and the other ITFS licensees in the market who are leasing, it cannot do so under the current rule. Or, to give another example, two ITFS licensees that are not leasing capacity may desire to deploy their own independent two-way systems, and desire to engage in a channel swap so that all of their upstream channels are contiguous and all of their downstream channels are contiguous. Again, because the two ITFS licensees are not part of any common system, the swap would be precluded under the current rule.

^{21/} See *id.* at ¶ 56.

As these examples illustrate, the benefits of channel swapping are not limited to situations where the swapping parties both are part of a common multi-licensee system. Preventing swaps in the situations illustrated is inconsistent with the objective throughout this proceeding of providing licensees with as much flexibility as possible to deploy advanced technologies.^{22/} Particularly since all channel swapping is done on a voluntary basis,^{23/} the Commission should revise its rules to permit licensees the maximum flexibility to engage in channel swapping, regardless of whether the licensees engaged in the swap both participate in a given common system. To accomplish that objective, the Petitioners request that the Commission remove the words “in the system” from Section 74.902(f) as suggested in Appendix A.

^{22/} See, e.g., *R&O*, 13 FCC Rcd at 19113, *Reconsideration Order* at ¶¶ 1, 56.

^{23/} See *R&O*, 13 FCC Rcd at 19168.

III. CONCLUSION.

In conclusion, although the *Reconsideration Order* has made dramatic strides towards improving the regulatory environment faced by wireless communications systems and MDS and ITFS licensees, the issues raised above must be addressed in order to promote the fullest possible deployment of advanced technologies on the MDS and ITFS spectrum.

Respectfully submitted,

By: 
Paul J. Sinderbrand
William W. Huber

WILKINSON BARKER KNAUER, LLP
2300 N Street, NW, Suite 700
Washington, DC 20037-1128
202.783.4141

Counsel to the Petitioners

November 23, 1999

APPENDIX A

1. Section 21.909(g)(6) is amended to read as follows:

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

* * *

(6) The response stations transmitting simultaneously at any time within any given region of the response service area utilized for purposes of analyzing the potential for interference by response stations shall conform to the numerical limits for each class of response station proposed in the application for the response station hub license. Notwithstanding the foregoing, where a response station hub licensee subchannelizes pursuant to Section 21.909(a) and limits the maximum EIRP emitted by any individual response station proportionately to the fraction of the channel that the response station occupies, the licensee may operate simultaneously on each subchannel the number of response stations specified in the license. Moreover, the licensee of a response station hub license may alter the number of response stations of any class operated simultaneously in a given region, without prior Commission authorization, provided that the licensee:

* * *

2. Section 74.902 is amended to read as follows.

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

3. Sections 74.931(c)(1) and (3) are amended to read as follows:

(1) Before leasing excess capacity on any one channel, the licensee must provide at least 20 hours per week of ITFS educational usage on that channel, except as provided in paragraph (c)(2) ~~and (c)(3)~~ of this section. An additional 20 hours per week per channel must be strictly reserved for ITFS use and not used for non-ITFS purposes, or reserved for recapture by the ITFS licensee for its ITFS educational usage, subject to one year's advance, written notification by the ITFS licensee to its lessee and accounting for all recapture already exercised, with no economic or operational detriment to the licensee. These hours of recapture are not restricted as to time of day or day of the week, but may be established by negotiations between the ITFS licensee and the lessee. This 20 hours per channel per week ITFS educational usage requirement and this recapture and/or reservation requirement of an additional 20 hours per channel per week shall apply spectrally over the licensee's whole actual service area.

* * * *

(3) The licensee may shift its requisite ITFS educational usage onto fewer than its authorized number of channels, via channel mapping or channel loading technology, so that it can lease full-time channel capacity on its ITFS station and/or associated ITFS booster stations, subject to the condition that it provide a total average of at least 20 hours per channel per week of ITFS educational usage on its authorized channels. The use of channel mapping or channel loading consistent with the Rules shall not be considered adversely to the ITFS licensee in seeking a license renewal. The licensee also retains the unabridgeable right to recapture, subject to six months' advance written notification by the ITFS licensee to its lessee, an average of an additional 20 hours per channel per week, accounting for all recapture already exercised. Where the licensee has no educational receive sites within the booster service area served by a booster, the licensee may lease the entire capacity of such booster without making any ITFS educational usage of such booster, provided that the licensee maintains the unabridgeable right to ready recapture at least 40 hours per channel per week for ITFS educational usage. The licensee may agree to the transmission of this recapture time on channels not authorized to it, but which are included in the wireless system of which it is a part. A licensee under this paragraph which leases excess capacity on any one of its channels to an operator ~~which utilizes digital transmissions on any one of the licensee's licensed channels~~ may "channel shift" pursuant to and under the conditions of paragraph (d)(2) of this section.

4. Section 74.931(d)(1) is amended to read as follows:

(1) The licensee must reserve a minimum of 5% of the capacity of its channels for instructional purposes only, and may not lease this reserved capacity. In addition, before leasing excess capacity, the licensee must provide at least 20 hours per licensed channel per week of ITFS educational usage, except as provided

in Section. This 5% reservation and this 20 hours per licensed channel per week ITFS educational usage requirement shall apply spectrally over the licensee's whole actual service area. However, where the licensee has no educational receive sites within the booster service area served by a booster, the licensee may lease excess capacity without making at least 20 hours per licensed channel per week of ITFS educational usage, provided that the licensee maintains the unabridgeable right to recapture on one months' advance notice such capacity as it requires over and above the 5% reservation to make at least 20 hours per channel per week of ITFS educational usage.

5. Section 74.939(g)(6) is amended to read as follows:

(g) An ITFS response station hub license establishing a response service area shall be conditioned upon compliance with the following:

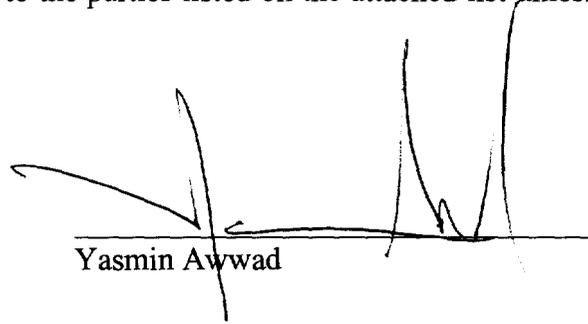
* * *

(6) The response stations transmitting simultaneously at any time within any given region of the response service area utilized for purposes of analyzing the potential for interference by response stations shall conform to the numerical limits for each class of response station proposed in the application for the response station hub license. Notwithstanding the foregoing, where a response station hub licensee subchannelizes pursuant to Section 74.939(a) and limits the maximum EIRP emitted by any individual response station proportionately to the fraction of the channel that the response station occupies, the licensee may operate simultaneously on each subchannel the number of response stations specified in the license. Moreover, the licensee of a response station hub license may alter the number of response stations of any class operating simultaneously in a given region, without prior Commission authorization, provided that the licensee:

* * *

CERTIFICATE OF SERVICE

I, Yasmin Awwad, hereby certify that the foregoing Petition for Further Reconsideration was served this 23rd day of November, 1999, by depositing a true copy thereof with the United States Postal Service, first-class postage prepaid, addressed to the parties listed on the attached list unless otherwise noted:



Yasmin Awwad

VIA HAND DELIVERY

Hon. William E. Kennard
Chairman
Federal Communications Commission
445 12th St., S.W., Room 8-B201
Washington, DC 20554

VIA HAND DELIVERY

Hon. Susan Ness
Commissioner
Federal Communications Commission
445 12th St., S.W., Room 8-B115
Washington, DC 20554

VIA HAND DELIVERY

Hon. Harold Furchtgott-Roth
Commissioner
Federal Communications Commission
445 12th St., S.W., Room 8-A302
Washington, DC 20554

VIA HAND DELIVERY

Helgi Walker, Senior Legal Advisor
Office of Commissioner Furchtgott-Roth
Federal Communications Commission
445 12th St., S.W., Room 8-A302
Washington, DC 20554

VIA HAND DELIVERY

Marsha MacBride, Legal Advisor
Office of Commissioner Powell
Federal Communications Commission
445 12th St., S.W., Room 8-A204
Washington, DC 20554

VIA HAND DELIVERY

Thomas Power, Senior Legal Advisor
Office of Chairman Kennard
Federal Communications Commission
445 12th St., S.W., Room 8-B201
Washington, DC 20554

VIA HAND DELIVERY

David Goodfriend, Legal Advisor
Office of Commissioner Ness
Federal Communications Commission
445 12th St., S.W., Room 8-B115
Washington, DC 20554

VIA HAND DELIVERY

Rich Chessen, Senior Legal Advisor
Office of Commissioner Tristani
Federal Communications Commission
445 12th St., S.W., Room 8-C302
Washington, DC 20554

VIA HAND DELIVERY

Hon. Michael Powell
Commissioner
Federal Communications Commission
445 12th St., S.W., Room 8-A204
Washington, DC 20554

VIA HAND DELIVERY

Hon. Gloria Tristani
Commissioner
Federal Communications Commission
445 12th St., S.W., Room 8-C302
Washington, DC 20554

VIA HAND DELIVERY

Keith Larson
Assistant Chief for Engineering
Mass Media Bureau
Federal Communications Commission
445 12th St., S.W., Room 2-C420
Washington, DC 20554

VIA HAND DELIVERY

Charles Dziedzic
Assistant Chief, Video Services Division
Federal Communications Commission
445 12th St., S.W., Room 2-A864
Washington, D.C. 20554

Joseph M. Johnson
Federal Communications Commission
P.O. Box 4807
180 Schriver Rd
Gettysburg, PA 17325

James E. Meyers
Matthew C. Wagner
Law Offices of James E. Meyers, P.C.
1633 Connecticut Avenue, NW
Suite 200
Washington, DC 20009-1041

Robert J. Rini
Rini, Coran & Lancellotta, P.C.
1350 Connecticut Avenue, N.W.
Dupont Circle Building, Suite 900
Washington, DC 20036

VIA HAND DELIVERY

Roy J Stewart
Chief, Mass Media Bureau
Federal Communications Commission
445 12th St., S.W., Room 2-C347
Washington, DC 20554

VIA HAND DELIVERY

Barbara A. Kreisman
Chief, Video Services Division
Federal Communications Commission
445 12th St., S.W., Room 2-A666
Washington, DC 20554

VIA HAND DELIVERY

David Roberts
Video Services Division
Federal Communications Commission
445 12th St., S.W., Room 2-A728
Washington, DC 20554

Steven A. Lancellotta
E. Lawrence Zolt
Rini, Coran & Lancellotta, P.C.
1350 Connecticut Avenue, N.W.
Dupont Circle Building, Suite 900
Washington, DC 20036

Wayne Coy, Jr.
Cohn and Marks
1920 N Street, N.W., Suite 300
Washington, DC 20036-1622

William B. Barfield
Thompson T. Rawls, II
BellSouth Corporation
1155 Peachtree Street, N.E., Suite 1800
Atlanta, GA 30309

William D. Wallace
Michael G. Grable
Crowell & Moring, LLP
1001 Pennsylvania Avenue, N.W.
Washington, DC 20004

Robert F. Corazzini
Suzanne S. Goodwyn
Petter & Corazzini, LLP
1776 K Street, N.W., Suite 200
Washington, DC 20006

Edwin N. Lavergne
J. Thomas Nolan
Shook, Hardy & Bacon, L.L.P.
1850 K Street, N.W., Suite 900
Washington, DC 20036

James A. Kirkland
Janell Fonsworth Coles
Bryan T. Bookhard
Mintz, Levin, Cohen, Ferris, Glovsky and Popeo, PC
701 Pennsylvania Avenue, NW
Suite 900
Washington, DC 20004-2608

John B. Schwartz
President
Instructional Telecommunications Found., Inc.
P.O. Box 6060
Boulder, CO 80306

Kevin J. Kelley Esq.
Qualcomm, Inc.
1233 20th Street, N.W.
Suite 202
Washington, DC 20036