

Before The  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554

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FEDERAL COMMUNICATIONS COMMISSION  
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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  
Licensees to Engage in Fixed Two-Way )  
Transmissions )  
\_\_\_\_\_)

PETITION FOR RECONSIDERATION AND CLARIFICATION

CATHOLIC TELEVISION NETWORK

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## EXECUTIVE SUMMARY

The Catholic Television Network (“CTN”) petitions for reconsideration and clarification of the rules adopted for two-way services on frequencies assigned to the Instructional Television Fixed Service (“ITFS”) and the Multipoint Distribution Service (“MDS”). CTN proposes several modifications to the new rules to improve the information available to licensees and the Commission and to clarify the procedures governing two-way services.

First, the Commission should clarify the procedures to be followed when there is a complaint of interference from a two-way facility. The Commission should define “documented complaint” to include evidence that the complainant has made a good faith attempt to resolve the interference dispute and that the allegedly interfering transmitter is, in fact, causing the harmful interference. The Commission should also authorize the filing of a “Notice of Complaint of Interference” which would allow an interfered-with party to resolve the source of interference in an expedited manner.

Second, the Commission should reconsider its failure to provide a complaint procedure at all for interference caused by brute force overload (“BFO”). BFO interference can be as debilitating as that from co- or adjacent-channel interference. Accordingly, the same complaint procedures should apply.

Third, the Commission should clarify that it will continue to accept applications for registered receive sites of existing ITFS stations on a minor change basis. Moreover, the Commission should clarify that each receive site is entitled to

interference protection as of the filing date of the application to register the receive site. Although the Commission established “protected service area” protection for ITFS facilities under the new rules, such protection does not necessarily cover all the registered receive sites of an ITFS facility which need protection. Accordingly, each applicant for an MDS or ITFS station should be required to demonstrate protection for all ITFS receive sites previously registered at the time its application is filed.

Fourth, the Commission should open the filing windows for two-way facilities to all categories of ITFS and MDS stations. Because the Commission restricted these windows to response station hubs, signal booster stations, and point-to-multipoint I-Channel facilities, existing stations would not be able to modify their main transmitting facilities in coordination with the development of two-way networks. This gap in the rules would likely hinder the efficient development of two-way systems, contrary to the Commission’s goals in this proceeding.

Fifth, the Commission should preserve the ability of ITFS stations to use their assigned 125 kHz channel for response transmissions. Pursuant to the new rules, a point-to-multipoint use of an “T” Channel could block use for response transmissions. For ITFS stations that choose to continue operations in analog mode, for cost or other reasons, the I-Channels offer the only opportunity to provide response transmission in their networks. This use should be preserved as primary to point-to-multipoint uses.

Sixth, the Commission should require the filing of interference analyses with applications for two-way facilities. CTN believes that it is important for interference analyses to be filed with the Commission to keep the station records together in one location, to have the analyses readily available for quick resolution of interference disputes, and to document the “terms of the authorization” which the interference analysis may represent.

Seventh, the Commission should clarify the effect of its new rules on excess capacity leases, the terms of which were automatically extended by operation of the new rules. Because the Commission extended the permissible term of excess capacity leases to 15 years, some 10-year leases were automatically conformed to the new lease term. Since the parties to these leases may not have agreed on this provision with knowledge that the new two-way rules were under consideration, they should not be required to bring these leases into compliance with the new rules.

Eighth, CTN points out a number of technical rules which need to be clarified or modified to facilitate two-way applications. These include:

- requiring that all interference calculations be based on a terrain-sensitive model;
- permitting use of any such terrain-sensitive model by applicants;
- amending the file format specified in Appendix D to the Report and Order to permit the specification of the amount and direction of any mechanical beam tilt;
- clarifying that the azimuth of the axis of symmetry may be specified in place of the azimuth of the main lobe for antennas that are symmetrical with more than one main lobe;

- clarifying that elevation patterns should be entered from -90 to +90 degrees, with positive numbers taken to mean angles below the horizontal;
- clarifying the scope of certain changes to a sectorized antenna system without prior authorization to mean “in any direction in the horizontal or vertical plane” wherever it appears in the rules;
- providing examples of the calculations specified in Appendix D to allow engineers to verify the correctness of the computer software they develop to implement the methodology; and,
- retitling Section 21.904 “Power Limitations” rather than the current “Transmitter Power” since that section, like the equivalent ITFS Section 74.935, discusses limitations on EIRP, and not transmitter power.

Finally, CTN requests that the Commission reconsider several of its proposals in comments filed in this proceeding to improve protection from harmful interference for ITFS stations, specifically: the use of a guardband to protect ITFS channels to avoid co- and adjacent-channel interference; prior testing of response transmitters to reduce the opportunity for brute force overload; opening periodic and regular filing windows for two-way applications to avoid overly burdensome application filings; and a two-step licensing procedure for two-way stations to encourage installation of systems which protect ITFS stations from interference.

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Multipoint Distribution Service and	)	
Instructional Television Fixed Service	)	File No. RM-9060
Licenses to Engage in Fixed Two-Way	)	
Transmissions	)	
_____	)	

PETITION FOR RECONSIDERATION AND CLARIFICATION

Pursuant to Section 1.429 of the Commission's Rules, the Catholic Television Network ("CTN"), by its undersigned attorneys, hereby petitions for reconsideration and clarification of certain aspects of the rules and policies adopted in the Report and Order in the above-referenced docket.<sup>1</sup>

CTN is an organization representing 18 Roman Catholic dioceses and archdioceses, each of which is licensed to provide Instructional Television Fixed Service ("ITFS") in its local parish schools and communities. As the Commission is well aware, CTN supported the basic proposal at issue in this proceeding, that is, to permit ITFS and Multipoint Distribution Service ("MDS") stations to provide two-way fixed services over their licensed frequencies. Accordingly, CTN was an active

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<sup>1</sup> See Report and Order, 13 FCC Rcd 19112 (1998) ("Order"). The Order was published in the Federal Register on November 25, 1998, 63 Fed. Reg. 65087. Hence this petition is timely filed. See 47 U.S.C. § 405; 47 C.F.R. § 1.429.

participant, filing comments and reply comments on the initial "Petition for Rulemaking" and comments, reply comments and ex parte written comments on the rules proposed in the "Notice of Proposed Rulemaking."<sup>2</sup> Because it does support two-way services, CTN has consistently sought to improve the operating parameters of two-way systems while preserving the essential character of the ITFS frequencies for instructional purposes.

CTN notes with regret that the Commission did not adopt many of the modifications to the rules and policies in the NPRM which CTN proposed for the benefit of the ITFS community. The Commission instead adopted an untested and complex regulatory regime which does not guarantee protection for ITFS stations equivalent to what they currently enjoy. The new rules thus have the potential to degrade the ability of ITFS licensees to deliver instructional and cultural material in an interference-free environment.<sup>3</sup>

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<sup>2</sup> See Notice of Proposed Rulemaking, 12 FCC Rcd 22174 (1998) ("NPRM").

<sup>3</sup> Although CTN is proposing clarifications for many of the new Parts 21 and 74 rules, it recommends that the Commission reconsider adoption of certain of CTN's proposals in this docket to provide greater protection for ITFS and to reduce the complexity of two-way service regulations. Specifically, CTN requests that the Commission reconsider the use of a guardband to protect ITFS channels to avoid co- and adjacent-channel interference. See CTN Reply Comments, at 12-23 (filed Feb. 9, 1998); CTN Comments on Ex Parte Submissions, at 9-10 (filed July 2, 1998). Other proposals that should receive reconsideration are CTN's recommendation for prior testing of response transmitters to reduce the opportunity for brute force overload, see CTN Reply Comments, at 1-11; opening periodic and regular filing windows for two-way applications to avoid overly burdensome application filings, see CTN Comments, at 31-33 (filed Jan. 8, 1998); and a two-step licensing procedure for two-way stations to encourage installation of systems which protect ITFS

(continued...)

Nevertheless, in the spirit of cooperation and the desire to improve the regulatory regime for two-way systems as adopted in the Order, CTN is seeking reconsideration and clarification to improve certain aspects of the new rules. CTN's proposals are designed to clarify the information that will be provided to the Commission, licensees and applicants. These proposals would also improve the capability of ITFS and MDS licensees to provide efficient and effective two-way services. CTN believes that its proposed modifications are consistent with the intent of Petitioners' original proposals and the rules and policies adopted by the Commission. Accordingly, each of the proposals outlined below should be incorporated into Parts 21 and 74.<sup>4</sup>

**I. THE COMMISSION MUST ADOPT GUIDELINES TO AVOID AMBIGUITY IN THE PHRASE "DOCUMENTED COMPLAINT."**

In various sections of the new rules, the Commission states that the filing of a "documented complaint" of co-channel or adjacent-channel interference requires the allegedly interfering facility to "promptly remedy the interference or immediately cease operations" and to bear the ultimate burden of proving to the Commission that interference has not occurred.<sup>5</sup> CTN supports these rules.

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stations from interference, see CTN Comments, at 34-35; CTN Reply Comments, at 29-32.

<sup>4</sup> The text of CTN's proposed rule amendments is set forth in Appendix A.

<sup>5</sup> See new Sections 21.909(g)(7) (MDS response stations); 21.913(g) (MDS signal booster stations); 74.939(g)(7) (ITFS response stations); 74.985(g) (ITFS signal booster stations).

However, this skeletal description of the process for resolving interference complaints is certain to lead to disputes about the process as well as the existence of interference.

Accordingly, CTN believes that the Commission must set forth in greater detail guidelines governing complaints of interference in the two-way environment. It is in the interest of all parties to this proceeding for the Commission: (1) to explain what a complaint must contain in order to be considered “documented;” and (2) to adopt a procedural mechanism for “promptly” or “immediately” shutting down the interfering facility while the interference issue is addressed. In CTN’s view, a documented complaint should require a relatively high evidentiary burden, and should result in the immediate shut-down of the offending transmitter. Since not all interference disputes will lend themselves to this resolution procedure, CTN also recommends adoption of an alternate procedure, “Notice of Complaint of Interference,” that will allow interference resolution to proceed expeditiously in a less burdensome manner. These two proposals are outlined below.

**A. Clarifying Procedures for Filing of and Action on a “Documented Complaint” Is Necessary to Ameliorate the Impact of New Rules on ITFS Systems.**

Because a party should only file a complaint to shut down another licensee’s facility based on sufficient evidence, and only in good faith, the Commission should clarify that a “documented complaint” requires that the complainant document and certify the accuracy of the evidence supporting its complaint of interference. First, the complainant should certify that it made a good-faith effort to resolve the

interference problem with the licensee of the allegedly interfering transmitter before bringing the matter to the Commission Staff.<sup>6</sup> Second, the complainant should submit evidence that the interference is being caused by a facility licensed to the party against whom the complaint is filed: for example, an engineering study, or a videotape of the results of an on/off test. These pieces of evidence will establish a prima facie basis for the complaint and enable the Commission to understand its merits. (See App. ¶¶ 1, 20.)

Under the new rules, these are fair and reasonable requirements. The Commission has traditionally relied upon the parties to an interference dispute to attempt to resolve the matter between themselves in the first instance.<sup>7</sup> CTN's proposed rule continues that tradition. Moreover, by imposing the burden of production on the complainant, the Commission can provide reasonable assurance to licensees that only those transmitters that are actually causing interference will be turned off pursuant to this procedure. The requirement that these items be certified in good faith reduces the potential for the filing of frivolous or harassing complaints, and provides clarity in the process for both parties.

However, defining "documented complaint" alone does not provide sufficient protection for ITFS stations that may suffer harmful interference. In the Order, the

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<sup>6</sup> The alleged interfering facility should also be required to make a good-faith effort to resolve the interference problem without Commission involvement. For example, CTN proposes that such facilities be specifically required to participate in "on/off" tests to determine the source of interference. (See App. ¶¶ 4, 25.)

<sup>7</sup> See, e.g., 47 C.F.R. § 74.903(c).

Commission relaxed the traditional regulatory principle requiring newcomer facilities to demonstrate, prior to receiving a license, that they will not cause harmful interference to existing stations.<sup>8</sup> In the future, the Commission will essentially trust newcomer two-way facilities in the ITFS band to avoid interference, shifting the burden to existing ITFS facilities to document any interference after it has already begun disrupting educational programs.<sup>9</sup> In light of this change, the Commission must require that the offending facility shut down while the Commission considers a properly documented and filed complaint. Otherwise, ITFS facilities could lose service while the parties to a dispute debate whether the interference must stop “promptly” or “immediately”<sup>10</sup>—not to mention arguing over exactly what “promptly” means.

CTN proposes that the rules governing co-channel and adjacent-channel interference be amended to require that, upon receipt of an FCC date-stamped copy of a “documented complaint,” the licensee of the offending facility must shut it down within 2 hours if served by fax or hand delivery and within 24 hours if served by certified U.S. mail. Additionally, the Commission should make clear that the interfering facility may not restart transmissions unless the complainant agrees in writing or a Commission order specifically allows it to do so. This procedure will

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<sup>8</sup> See, e.g., Midnight Sun Broadcasting Co., 3 RR 1751 (1948).

<sup>9</sup> See, e.g., new Section 21.909(g).

<sup>10</sup> See, e.g., new Section 21.909(g)(7) (“[The interfering facility] must promptly remedy the interference or immediately cease operations”).

enable all parties to work out the dispute without leaving the existing ITFS station to suffer continued interference. (See App. ¶¶ 13, 18, 33, 37, 42.)

The automatic shut down proposed herein is a drastic but essential replacement for the policy of requiring newcomers to prove non-interference before beginning operation; it is, in fact, a necessary procedure for protecting existing ITFS licensees. Additionally, adoption of this procedure will put two-way service providers on notice that existing ITFS licensees can follow these procedures to shut down interfering systems, encouraging applicants to apply for facilities that will not interfere in the first place.

**B. The Commission Should Allow the Filing of a “Notice of Complaint of Interference” to Ensure Prompt Resolution of Interference Disputes.**

As clarified by the foregoing proposals, the filing of a “documented complaint” will require the alleged interfering facility to shut down upon receiving notice of the documented complaint, but only if the complainant can produce documentary evidence of high reliability that the facility at issue is causing the interference. However, at times, it may be difficult for the interfered-with licensee to document the source of interference, and/or a licensee may discover that the licensee of the suspected facility is not cooperative. In these circumstances, it is still critical for the licensee to be able to resolve the interference issue quickly even though the complainant may not be able to substantiate the facts necessary to establish a “documented complaint.”

In these circumstances, the Commission should make available an alternate complaint procedure that is less burdensome on both sides. Specifically, CTN proposes that the Commission allow an ITFS system to file a “Notice of Complaint of Interference” that would allow the alleged interfering facility three (3) business days to check its facilities and submit proof that its facilities are not the source of the interference. (See App. ¶¶ 13, 18, 33, 37, 42.) On the one hand, this option will not require the same high evidentiary burden that the “documented complaint” procedure will require of ITFS systems, which typically have neither the engineering staff nor the resources to determine the source of interference. On the other hand, the filing of a “Notice of Complaint of Interference” will be less draconian for the alleged interfering facility, because the licensee will have the opportunity to establish that it is not the source of interference, or, otherwise to reach an accommodation with the complainant before shut down is required.

**II. THE COMMISSION SHOULD ADOPT GUIDELINES FOR FILING A “DOCUMENTED COMPLAINT” WITH RESPECT TO INTERFERENCE ARISING FROM BRUTE FORCE OVERLOAD.**

One of CTN’s original proposals in this proceeding was for the Commission to require a testing period for response station transmitters to determine that they would operate interference-free.<sup>11</sup> However, the Commission declined to adopt this procedure.<sup>12</sup> As a result, the risk of interference from brute force overload (“BFO”)

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<sup>11</sup> See CTN Comments, at 12-15.

<sup>12</sup> See Order, ¶ 55.

interference is unchecked because there is no pre-installation testing. Moreover, there is no provision in the rules for interfered-with ITFS stations to file a complaint requiring an interfering station to shut down while the complaint is resolved.<sup>13</sup> CTN urges the Commission to remedy this glaring gap in the new rules by adopting rules for the filing of “documented complaints” and “Notices of Complaint of Interference” of BFO interference similar to those proposed above for co-channel and adjacent channel interference. (See App. ¶¶ 14, 19, 34, 38, 43.) Because interference from non co- and adjacent-channel transmissions can be as debilitating as interference from co- and adjacent-channel transmissions, the same rules should apply to both situations to resolve the interference.

### **III. THE COMMISSION SHOULD CONTINUE TO REQUIRE PROTECTION FOR REGISTERED ITFS RECEIVE SITES.**

The Commission should clarify that it will continue to accept applications for registration of receive sites of existing ITFS stations on a minor change basis, and it should make clear that a receive site is entitled to protection as of the filing date of the application to register the receive site. To implement these policies, it should make the following specific amendments to the rules adopted in the Order:

- Amend Sections 74.903(b)(1), (b)(2), and (d) to remove the reference in each section to “September 17, 1998” and clarify that all registered receive sites are entitled to protection, not just those registered as of September 17, 1998 (see App. ¶¶ 23, 24, 26);

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<sup>13</sup> See new Sections 21.909(g)(8) (MDS response stations); 21.913(h) (MDS signal booster stations); 74.939(g)(8) (ITFS response stations); 74.985(h) (ITFS signal booster stations).

- Amend Sections 21.909(d)(3)(iv)-(v) and 74.939(d)(3)(iv)-(v) to state that the technical showings required under those sections must be made with respect to all previously registered receive sites, and bring those sections into conformity with Sections 21.902(b)(3)-(4), 21.913(b)(3), and 74.985(b)(5) (each of which refers to “previously registered” receive sites) (see App. ¶¶ 10, 11, 30, 31);
- Amend Sections 21.909(n) and 74.939(p) to clarify that the brute force overload protections set forth in those sections require a response station hub licensee to notify an ITFS licensee of the installation of a response station transmitter within the prescribed distance of an ITFS receive site if that receive site is registered at the time of the proposed installation. (See App. ¶¶ 15, 39.) In other words, the filing of a response station hub application does not “cut off” future registered receive sites from the benefit of the notification rules.

Under the existing rules, interference protection for ITFS stations is keyed to receive sites.<sup>14</sup> Registered receive sites are entitled to protection,<sup>15</sup> and applications to add or modify receive sites can be filed as minor modifications at any time.

Applications for new or modified ITFS and MDS facilities are required to demonstrate protection of all previously registered receive sites.<sup>16</sup>

The ability to use ITFS and MDS frequencies for two-way operations and the policy changes associated with that use have not changed the fundamental principle that ITFS receive sites are entitled to protection from future applicants. ITFS

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<sup>14</sup> See 47 C.F.R. § 74.903(a-b); see also Amendment of Part 74 of the Commission’s Rules in Regard to the Instructional Television Fixed Service, 101 FCC 2d 49, 97 (1985) (“we will continue to require applications to be filed to add receive sites in order to be entitled to interference protection”).

<sup>15</sup> 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, 6 FCC Rcd 6764, 6765 n.9 (1991) (“During ITFS operations, registered receive sites are protected from harmful interference.”).

<sup>16</sup> 47 C.F.R. §§ 21.902(i)(1), 74.903(b).

licensees must retain the ability to add receive sites that will subsequently be entitled to protection because the sites to which programming is transmitted are not fixed at the time that an initial ITFS application is filed (or any other subsequent third-party application), but instead may be augmented as educational needs and resources change.

In the Order, the Commission adopted a new rule granting each ITFS licensee protection within a 35-mile protected service area regardless of whether it leases excess capacity.<sup>17</sup> This new rule assures some protection for a licensee's receive sites whenever they may be added. However, it does not eliminate the need for the Commission to continue maintaining a receive site registry, for several reasons. First, actual receive sites requiring protection may be located outside the 35-mile protected service area.<sup>18</sup> Second, the Order has added new provisions for the protection of registered receive sites from BFO, which are addressed to

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<sup>17</sup> See new Sections 74.903(b)(1-2), (d). CTN notes that these sections, in their current form, appear to violate the Administrative Procedure Act because these rules were not proposed in the NPRM. In the NPRM, the Commission did not suggest that, aside from the two-way rules, it would adopt a rule which would change the procedures for preparing interference analyses for ITFS stations generally, nor can these rules be considered "logical outgrowths" of any proposals that were published. See Omnipoint Corp. v. FCC, 78 F.3d 620, 631-32 (D.C. Cir. 1996). Adoption of CTN's proposed revision is necessary to re-establish the procedures applicable under the existing rules.

<sup>18</sup> While Section 74.903(a)(5) states that no receive site farther than 35 miles from the main transmitter is entitled to protection, this rule is designed only to limit the ability of an ITFS licensee to extend protection unfairly beyond its actual service area, and it can be waived if a licensee can demonstrate that a distant receive site actually receives service. Amendment of Part 74 of the Commission's  
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individual receive sites and not to a protected service area.<sup>19</sup> Third, certain applicants are required to demonstrate their eligibility to hold an ITFS license through their provision of service to accredited schools, which must be included among their receive sites.<sup>20</sup>

It is essential for the preservation of the educational mission of ITFS that applicants for new and modified transmission facilities demonstrate protection of receive sites that have been registered at the time of the application. Similarly, the notification provisions designed to assist in the discovery and mitigation of brute force overload must be applied to all receive sites registered at the time of the proposed response station deployment. Only in this manner can educators be assured of needed protections as their program distribution needs grow.

For reasons of administrative convenience, the Commission need not issue a grant in order for a receive site to be considered "registered." In the past there has been confusion about the difference between receive sites that had been registered and those for which registration applications were pending.<sup>21</sup> The Commission should simplify its own procedures and those of ITFS and MDS applicants and

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Rules With Regard to the Instructional Television Fixed Service, 10 FCC Rcd 2907, 2917 (1995).

<sup>19</sup> Order, ¶ 55.

<sup>20</sup> See 47 C.F.R. § 74.932(a)(4).

<sup>21</sup> See, e.g., Cross Country Telecommunications, Inc., 9 FCC Rcd 1916, 1916 (1994) ("Unfortunately, the ITFS data base contains both ITFS receive sites

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consider a receive site “registered” as of the filing date of the application listing the receive site.

**IV. ALL FILING WINDOWS FOR TWO-WAY APPLICATIONS SHOULD BE OPEN TO ALL CATEGORIES OF ITFS APPLICATIONS.**

The Commission should extend eligibility in any filing windows opened under the new rules to all ITFS and MDS applications, not just those proposing two-way uses.<sup>22</sup> (See App. ¶¶ 2, 27.) Because the Commission has not established a procedure to file applications for new and modified ITFS facilities on a regular and predictable basis, it has failed to accomplish a fundamental goal of this proceeding: to eliminate the application processing bottleneck that has handcuffed the wireless cable industry for years.<sup>23</sup>

While the Commission gave no reason for excluding these categories of applications from its expedited processing rules, the exclusion may have been based on the competitive bidding authority contained in Section 309(j) of the

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registered and those receive sites merely proposed for registration, without distinguishing the two types.”).

<sup>22</sup> See Order, ¶ 65 (rolling one-day window governs filing of response station hubs or boosters); new Sections 21.27(d), 74.911(d) (restricting initial window to applications for high-power signal booster stations, response station hubs, and I channel point-to-multipoint licenses).

<sup>23</sup> See Order, ¶ 61 (“failure to adopt an expedited processing system will be seriously detrimental to the provision of two-way service”).

Communications Act.<sup>24</sup> However, there is no apparent reason that the mutual exclusivity doctrine that the Commission has adopted with respect to applications for response station hubs, high-powered booster stations, and point-to-multipoint uses of the I Group channels cannot be applied to all categories of two-way service applications. For those three specific categories of applications, the Commission has determined that it may deem simultaneously filed conflicting applications not to be mutually exclusive, and may require applicants to resolve any conflicts.<sup>25</sup> However, if the Commission can make such a determination with respect to point-to-multipoint uses of I Group channels, it can make such a determination with respect to any ITFS application, since applications for the I Group channels associated with the ITFS channels are ITFS applications governed by the ITFS rules.

Not only does adopting expedited filing procedures for all categories of two-way ITFS and MDS applications make logical sense, it also will alleviate the need for the filing of unnecessary booster station applications in lieu of prohibited major modification applications. For example, an ITFS licensee desiring to co-locate with other ITFS and MDS licensees in a market-wide “master plan” cannot do so under the rules the Commission has adopted if co-location would require a major

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<sup>24</sup> See Implementation of Section 309(j) of the Communications Act, 13 FCC Rcd 15920, ¶ 207 (1998) (“the same application and competitive bidding procedures that we are adopting herein for the broadcast services will also apply to ITFS”).

<sup>25</sup> See Order, ¶ 65 (“applications filed on the same day will not be treated as mutually exclusive by the Commission”).

modification to its facilities. Instead, a qualified licensee might apply for a high-power booster with the desired master-plan parameters and maintain the unwanted main transmitter in name only.<sup>26</sup> This situation is clearly wasteful of the licensees' and Commission's resources.

If the Commission does not elect to permit all categories of two-way ITFS applications to be filed under the new expedited processing rules, it at least should allow applications for traditional return-path use of I Group channels to be filed under the expedited application processing rules. Since the Commission permitted expedited filing of applications for point-to-multipoint use of I Group channels, it should permit expedited filing of applications for their use in the traditional response direction as well. When combined with applications to swap I Group channels (which may be filed at any time and processed rapidly),<sup>27</sup> this will provide ITFS licensees with the ability to accumulate contiguous spectrum blocks of up to 500 kHz in bandwidth for two-way use.

**V. ANY "T" CHANNEL USED FOR TALK-BACK TRANSMISSIONS SHOULD BE TREATED AS PRIMARY TO OTHER USES.**

In the Order, the Commission rejected a proposal that "T" channels used for non-ITFS purposes be treated as secondary to "T" channels used for ITFS

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<sup>26</sup> This alternative is open to ITFS licensees who have applied for a response station hub. See new Section 74.985(b).

<sup>27</sup> See Order, ¶ 109; new Section 74.902(f).

purposes.<sup>28</sup> CTN recognizes that, in adopting rules for I channels, the Commission attempted to promote as much flexibility for a licensee's use of the I channels as it did for 6 MHz ITFS channels. However, the rules adopted for I channels have the effect of also limiting the flexibility available to ITFS licensees to provide two-way instructional services.

Currently, each of the I channels is associated with a specific 6 MHz ITFS or MDS channel.<sup>29</sup> The Commission did not change this regime in the Order.<sup>30</sup> Therefore, each of the I channels is effectively assigned for use and can be used for response transmitters in either analog or digital mode. Indeed, for ITFS stations that choose to continue operating in analog mode, for cost or other reasons, the I channels offer the only opportunity to provide response transmissions in their networks.

By allowing I channels to be used for upstream or downstream facilities, the Commission has complicated the interference environment for any analog I channel use. Under the prior regime, interference to I channels was probably not even a factor in most instances, because response transmitters operated at such low power.<sup>31</sup> Therefore, every ITFS station had available to it the opportunity to

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<sup>28</sup> Order, ¶ 60.

<sup>29</sup> See 47 C.F.R. § 74.939(d).

<sup>30</sup> See new Section 74.939(j).

<sup>31</sup> See 47 C.F.R. § 74.939(e) (transmitter power output limited to 250 mW, except upon a showing of need for up to 2 watts).

provide two-way transmissions. However, if an ITFS licensee were required to protect adjacent I channel downstream uses, then its ability to use an I channel may be lost although the channel is already assigned to it by Commission rule.<sup>32</sup>

The modest amount of spectrum available for I channels does not appear to justify such policy. Accordingly, CTN recommends that the Commission reconsider its policies on I channel use, and give weight to the fact that under the old and new sets of rules, each I channel, whether in use or not, is de facto licensed to an ITFS or MDS licensee. In order to preserve the value of this assignment, and the essential purpose of I channels, the Commission should modify its new Section 74.939(l) to ensure that I channels can be used for upstream purposes without regard to whatever downstream uses may be implemented on co- or adjacent I channels. (See App. ¶ 36.) While applicants and licensees should not be required to protect I channels not in use, they should also not be heard to complain about interference from I channels operated as upstream transmitters and should be required to protect uses that are in accord with current Section 74.939. This proposal would ensure that I channels can be used for the instructional purpose for which they have already been assigned to each ITFS licensee.

#### **VI. THE COMMISSION MUST REQUIRE THE FILING OF INTERFERENCE ANALYSES WITH APPLICATIONS.**

The new rules for filing applications for two-way systems require applicants for response station hubs, booster stations, and I-Channel stations to submit to

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<sup>32</sup> See new Section 74.939(l)(3).

International Transcription Services, Inc. (“ITS”), interference analyses that include the data required by Appendix D to the Order.<sup>33</sup> Similarly, pursuant to new Sections 21.909(g)(6) and 74.939(g)(6), licensees of response station hubs that alter the number of response stations — which under the rule can be accomplished without prior Commission notification — must submit to ITS an analysis “establishing that such alteration will not result in any increase in interference.” None of these sections require the interference analyses that are submitted to ITS to also be filed with the Commission, except upon Commission staff request.<sup>34</sup>

CTN recognizes that the Commission has adopted a regime that relies heavily on the good faith of applicants and takes Mass Media Bureau staff out of the business of reviewing interference analyses. However, adoption of such a regime does not justify eliminating the requirement that interference analyses be filed with the Commission. CTN urges the Commission to require that any interference analyses that the rules require, including those prepared for response station hub applications, be filed with the Commission in the first instance. (See App. ¶¶ 8, 9, 12, 16, 17, 28, 29, 32, 35, 40, 41.)

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<sup>33</sup> See new Sections 21.909(c)(2) (response hub), 21.913(b) (high-power booster), 21.913(e) (low-power booster), 74.939(c)(2) (response hub), 74.939(l) (I-Channel), 74.985(b) (high-power booster), 74.985(e) (low-power booster).

<sup>34</sup> Licensees are required to file interference analyses with the Commission “only upon Commission staff request.” See new Sections 21.909(c)(3) and (g)(6)(iv), 74.939(c)(3) and (g)(6)(iv).

Several sound public policy reasons support this rule. First, the engineering information in some instances may be an amendment to an analysis that was required under the rules to be previously filed with the Commission, and, therefore, should be obtainable through the same set of records. Moreover, it is far more efficient for the Commission to have the interference analysis on file in the event that a dispute arises about whether the analysis complies with the methodology set forth in Appendix D. Also, with respect to hub stations, the Commission stated that “the assumptions for these items [i.e., response station parameters and distribution] used by an applicant *in the interference analysis* become, upon grant of the license, *terms of the authorization* and, as such, must be observed.”<sup>35</sup> In sum, the applicant must prepare the analysis, rely upon it, and make it available to all potentially affected parties, and, upon grant, it becomes the terms of its Commission authorization; there is simply no reason not to require that the analysis be filed with the Commission.

CTN is also concerned that the new rule sections regarding applications for two-way facility licenses do not require an applicant to certify to the accuracy of the interference analysis that must accompany such applications and notifications.<sup>36</sup>

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<sup>35</sup> Order, ¶ 52 (emphasis supplied).

<sup>36</sup> See, e.g., new Sections 21.909(c)(1) (applications for MDS response station hubs); 21.909(g)(6)(i) (notification of MDS response station increases); 21.913(b) (applications for MDS high power booster stations); 74.939(c)(1) (applications for ITFS response station hubs); 74.939(g)(6)(i) (notifications of ITFS response station increases); 74.985(b) (applications for ITFS high-power booster stations).

Without certification, such analyses are simply promises that can be broken at will and without penalty. The Commission should amend these sections to require that applicants and licensees certify the accuracy of interference analyses, especially now that such analyses represent the only opportunity to prevent harmful interference before it occurs.

#### **VII. THE COMMISSION SHOULD CLARIFY THE EFFECT OF AUTOMATIC EXCESS CAPACITY LEASE EXTENSIONS.**

In the Order, the Commission adopted new rules governing excess capacity leases, and required that leases "entered into, renewed, or extended after March 31, 1997" be brought into compliance with the new rules.<sup>37</sup> One of the rule changes governing excess capacity leases allows lease terms of 15 years, whereas lease terms were limited to 10 years under the previous rules.<sup>38</sup> The adoption of this new rule has led to uncertainty with respect to existing leases.

Many excess capacity leases adopted under the 10-year term limitation contain a provision that automatically extends the initial term of the lease to the maximum permitted by the rules in the event that the FCC changes its rules and permits longer terms. Therefore, these leases are automatically extended for an additional five years as of the effective date of the rules adopted in the Order. Under a literal reading of the grandfathering rules, these leases could be required to be brought into compliance with all of the rule changes governing excess capacity

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<sup>37</sup> Order, ¶ 131.

<sup>38</sup> Id., ¶ 133.

leases, since they were "extended after March 31, 1997." However, in requiring certain leases to comply with the new rules, the Commission intended only to ensure that parties who had bargained for a lease extension with knowledge that two-way rules would be forthcoming take responsibility for compliance.<sup>39</sup> Since the automatic extension provisions were agreed upon many years ago without knowledge of the rules proposed in the two-way proceeding, the parties should not be forced to renegotiate their leases as a result of an automatic extension. Accordingly, the Commission should clarify that it will not require leases that are automatically extended in the manner described above to be brought into compliance with the rules adopted in the Order.

#### **VIII. THE COMMISSION SHOULD AMEND THE NEW RULES TO CORRECT A NUMBER OF TECHNICAL DEFICIENCIES.**

As explained in the accompanying Joint Engineering Statement, the rules adopted in the Order, including the methodology of Appendix D, contain a number of technical errors and inconsistencies. Specific amendments are discussed below and in the Joint Engineering Statement.

The Commission should amend Sections 21.902(f)(1), 21.902(f)(2)(i), 21.902(f)(2)(ii), 74.903(a)(1), 74.903(a)(2)(i), and 74.903(a)(2)(ii) to require in each case that all interference calculations be based on a terrain-sensitive model. (See App. ¶¶ 5, 6, 21, 22.) Currently, those rule sections are inconsistent regarding the use of free-space calculations, and several use the undefined term "unobstructed

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<sup>39</sup> Id., ¶ 131.

path.”<sup>40</sup> Amending these sections to require the use of a terrain-sensitive model in all cases will permit the model to choose when an unobstructed path exists and free-space calculations may be used.<sup>41</sup>

The Commission should clarify that any terrain-sensitive propagation model may be used for interference calculations. Currently, the rules are ambiguous regarding the use of a specific propagation model. Sections 21.909(o) and 74.939(q) require that interference calculations be performed in accordance with Appendix D.

Appendix D states:

When analyzing interference from response stations to other systems and from other systems to response station hubs, *a propagation model* shall be used that takes into account the effects of terrain and certain other factors. This model is derived from basic calculations described in NTIS Technical Note 101.<sup>42</sup>

The text goes on to describe a particular model in detail, making it appear that the specific model described is mandatory. However, as the emphasized text implies, any model that takes into account the requisite factors should be permissible. The Commission should resolve this ambiguity in a way that does not favor a particular model. The Commission does not require the use of a particular model for interference calculations *not* covered by Appendix D (*e.g.*, those not involving response stations or hubs), and all interference calculations in a particular

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<sup>40</sup> Joint Engineering Statement at ¶¶ 1A-1B.

<sup>41</sup> Id. at ¶1C.

<sup>42</sup> Order, Appendix D, at 10 (no page numbers in original) (emphasis added).

application should be performed consistently.<sup>43</sup> Applicants should be required to clearly state the value of each parameter or variable in the model that was chosen for the analysis, so that others can independently verify the results.<sup>44</sup>

The Commission should amend the file format specified in Appendix D to permit the specification of the amount and direction of any mechanical beam tilt.<sup>45</sup> It should clarify that the azimuth of the axis of symmetry may be specified in place of the azimuth of the main lobe for antennas that are symmetrical with more than one main lobe.<sup>46</sup> It should clarify that elevation patterns should be entered from -90 to +90 degrees, with positive numbers taken to mean angles below the horizontal.<sup>47</sup>

The Commission should clarify the scope of Section 21.42(c)(8), which permits certain changes to a sectorized antenna system without prior authorization. That section states that a change does not require prior authorization if it does not result in an increase in radiated power by more than one dB in any direction. Although the meaning of “in any direction” should be clear on its face, Staff have previously interpreted the same language in other rule sections to mean “in any *horizontal* direction.”<sup>48</sup> However, such an interpretation is subject to abuse, and the term

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<sup>43</sup> See Joint Engineering Statement at ¶¶ 2A, 2C.

<sup>44</sup> Id. at ¶ 2B.

<sup>45</sup> Id. at ¶ 3A.

<sup>46</sup> Id. at ¶ 3B.

<sup>47</sup> Id. at ¶ 3C.

<sup>48</sup> Id. at ¶ 3D.

should be clarified to mean “in any direction in the horizontal or vertical plane” wherever it appears in the rules. (See App. ¶ 3.)

The Commission should provide examples of the calculations specified in Appendix D to allow engineers to verify the correctness of the computer software they develop to implement the methodology.<sup>49</sup> When it previously adopted a new and complex calculation methodology for digital television interference studies, it provided sufficient guidance for parties implementing the methodology to verify the operation of their software.<sup>50</sup> The examples the Commission provides should encompass the widest possible set of variations in facilities configurations.<sup>51</sup>

Finally, the Commission should retitle Section 21.904 “Power Limitations” rather than the current “Transmitter Power” since that section, like the equivalent ITFS Section 74.935, discusses limitations on EIRP, and not transmitter power.<sup>52</sup> A conforming amendment to Section 21.904(c) is required to replace the reference to “transmitter power” with “EIRP.”<sup>53</sup> (See App. ¶ 7.)

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<sup>49</sup> Id. at ¶¶ 3E-3F.

<sup>50</sup> Id. at ¶ 3F.

<sup>51</sup> Id. at ¶ 3G.

<sup>52</sup> Id. at ¶ 4A.

<sup>53</sup> Id. at ¶ 4B.

**IX. CONCLUSION**

CTN requests that the Commission reconsider and clarify the rules adopted in the Report and Order and modify the rules governing ITFS and MDS as set forth above.

Respectfully submitted,

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