

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

In the Matter of Applications of
HISPANIC INFORMATION AND TELECOMMUNICATIONS NETWORK, INC.
For Authority to Construct New Instructional Television Fixed Service Stations on the B Group Channels and D Group Channels, Luquillo, Puerto Rico
File Nos. BPLIF-19950215DS
BPLIF-19950316DG

MEMORANDUM OPINION AND ORDER

Adopted: October 19, 2004

Released: October 22, 2004

By the Commission:

I. INTRODUCTION

1. We have before us a consolidated application for review (AFR) filed on March 22, 2004 by Hispanic Information and Telecommunications Network, Inc. (HITN). HITN requests reversal of the dismissal of the above-captioned applications for authority to construct new Instructional Television Fixed Service (ITFS) stations to operate on the B Group channels and D Group channels at Luquillo, Puerto Rico, and that the Commission reinstate the applications. For the reasons stated below, we deny the AFR.

II. BACKGROUND

2. On February 15, 1995, HITN filed the above-captioned B Group channel application. The application appeared on public notice as accepted for filing on April 26, 1995. On July 7, 1995, petitions to deny were filed against the application by American University of Puerto Rico (AUPR), licensee of co-channel Station WLX323, San Juan, Puerto Rico, and WHTV Broadcasting Corporation (WHTV), lessee of AUPR's excess channel capacity. AUPR and WHTV alleged that the proposed HITN facility would cause objectionable interference to the protected service area of Station WLX323, which transmits from a site approximately 21 miles from HITN's proposed facility.

1 Consolidated Application for Review (filed March 22, 2004) (AFR).

2 See id. at iii.

3 File No. BPLIF-19950215DS, (filed Feb. 15, 1995) (B Group application). The B Group application was amended on February 16, 1995 to specify proposed receive sites, request a protected service area and correct the proposed transmit site coordinates. On May 3, 1995, the B Group application was amended to specify additional receive sites.

4 See ITFS Report No. A-35, Public Notice (rel. Apr. 26, 1995).

5 Petition to Deny (filed Jul. 7, 1995).

6 Id.

3. On March 16, 1995, HITN filed the above-captioned D group channel application.⁷ The application appeared on public notice as accepted for filing on April 26, 1995.⁸ On May 3, 1995, the application was amended to specify additional receive sites.⁹ On July 7, 1995, petitions to deny were filed against the application by the Puerto Rico Medical Association (PRMA), licensee of co-channel Station WLX322, San Juan, Puerto Rico and WHTV, lessee of PRMA's excess channel capacity.¹⁰ PRMA and WHTV claimed that the proposed HITN facility would cause objectionable interference to the protected service area of station WLX322, whose transmitter operates approximately 21 miles from HITN's proposed transmit facility.¹¹ Additionally, Petitioners submitted technical testimony to demonstrate that (1) HITN's receive sites R1 and R2 would suffer interference from existing co-channel Aguas Buenas facility (WLX322) as to render the sites useless, and (2) interference notwithstanding, the desired signal level to receive sites R1 and R2 would be below accepted levels for a good picture quality.¹²

4. In opposition to the petitions to deny, HITN stated that it would upgrade the receive antennas of Stations WLX322 and WLX323 and utilize precision offset equipment to eliminate any predicted interference to the stations' protected service areas.¹³ In a further effort to cure the predicted interference, HITN amended the applications to replace the omnidirectional (Andrew Corp. model HMD12VO) transmitting antenna with a directional (Andrew Corp. model HMD8VC) transmitting antenna.¹⁴ Additionally, on September 15, 1995, HITN further amended both applications to address Petitioners' claim that the desired signal levels for HITN's receive site would be below accepted levels for a good picture quality by requesting digital authority.¹⁵ HITN claimed that its proposed use of digital modulation techniques, which are more robust than analog modulation, coupled with the use of 4-QAM,¹⁶ would allow for a receive site to obtain a clear picture with a signal-to-noise ratio as low as 10 dB.¹⁷ Finally, on February 16, 1996, HITN amended the applications to reorient the transmit antenna and decrease the power at the output of the antenna.¹⁸

⁷ File No. BPLIF-19950316DG (filed Mar. 16, 1995) (D Group Application).

⁸ See ITFS Public Notice Report No. A-35.

⁹ Petition at 2.

¹⁰ Petition to Deny (filed Jul. 7, 1995). We will refer to AUPR, PRMA, and WHTV collectively as "Petitioners."

¹¹ *Id.*

¹² *Id.* at Exhibit A: du Treil Statement. For both applications, receive site R1 is located at coordinates 18°-25"-13' N. Latitude, 66°-11"-05' W. Longitude. Receive site R2 is located at coordinates 18°-19"-22' N. Latitude, 66°-17"-51' W. Longitude. Receive site R3 (the Robinson School) is located at coordinates 18°-25"-13' N. Latitude, 66°-11"-05' W. Longitude. Receive site R4 is located at coordinates 18°-27"-20' N. Latitude, 66°-03"-57' W. Longitude. *Id.* at Figure 1.

¹³ See HITN Opposition (filed Aug. 4, 1995).

¹⁴ HITN Amendment (filed Sep. 13, 1995). See also Letter from Benjamin Perez, Counsel to HITN, to Clay Pendarvis, Acting Chief, Distribution Services Branch, File No. BPLIF-950316DG (filed Sep. 13, 1995).

¹⁵ See Petition at 2, citing HITN Amendments (filed Sept. 15, 1995).

¹⁶ QAM (quadrature amplitude modulation) is a method of combining two amplitude-modulated (AM) signals into a single channel, thereby doubling the effective bandwidth. QAM is used with pulse amplitude modulation (PAM) in digital systems, especially in wireless applications.

¹⁷ Petition at 5 and Exhibit C: Engineering Statement of DeLawder Communications, Inc. (dated Apr. 16, 2002) (DeLawder Statement) (stating that the Commission allows modulation densities from 4-QAM to 64-QAM).

¹⁸ HITN Amendments (filed Feb. 16, 1996).

5. After HITN filed its February 16, 1996 amendments, Petitioners submitted a supplement to their petitions to deny alleging that because of the antenna reorientation and increased line losses proposed by HITN, HITN's transmission facilities would not be capable of providing the intended service.¹⁹ Specifically, Petitioners stated that all of HITN's proposed receive sites would receive a signal level from the proposed transmit station that is below accepted levels for a good picture quality.²⁰

6. On March 12, 2002, the Branch dismissed the applications.²¹ The Branch determined that HITN's proposed facilities, as amended, would no longer be capable of providing service to three of its four proposed receive sites.²² With respect to the R4 receive site, Escuela Luis Munoz Rivera (Rivera), the Branch further concluded that because HITN had failed to submit a letter of intended use, or to provide information regarding that site's accreditation in the application, HITN had not established its eligibility pursuant to Section 74.932 of the Commission's Rules.²³

7. On April 17, 2002, HITN filed separate petitions for reconsideration of the Branch's actions.²⁴ HITN argued that dismissal of the above-captioned applications was based on an erroneous conclusion that good faith cooperative technical amendments made by HITN to its application, to address concerns of the Petitioners, would so handicap its proposed facility as to render it unable to serve three of its four specified receive sites.²⁵ HITN argued that the conclusion that it could not qualify as an applicant based on service to the sole remaining serviceable receive site was technically incorrect and inconsistent with the public interest and the Commission's statutory obligations.²⁶

8. On February 20, 2004, the Broadband Division (Division) of the Wireless Telecommunications Bureau denied both Petitions in separate orders.²⁷ The Division reiterated its conclusion that HITN would be unable to serve its receive sites because of interference from other stations.²⁸ Even as amended, HITN's facilities would fail to satisfy the required desired-to-undesired (D/U) ratio used to determine the existence of harmful co-channel interference.²⁹ With regard to the fourth receive site (Rivera), the Division noted that HITN failed to submit the requisite documentation demonstrating that an accredited institutional or governmental organization would receive and use HITN's educational programming, which is necessary to establish ITFS eligibility under Commission

¹⁹ Petitioners Further Supplement to Petition to Deny (Apr. 16, 1996) at Exhibit A: Technical Statement of du Treil, Lundin & Rackley, Inc. (dated April 9, 1996) (du Treil Statement).

²⁰ *Id.* See also HITN Amendment (filed Sept. 15, 1995). See Petition at 2.

²¹ See Letters from Clay C. Pendarvis, Acting Chief, Distribution Services Branch, Video Service Division, Mass Media Bureau, Federal Communications Commission to HITN, c/o Rudolph J. Geist, Esq. (Mar. 12, 2002) (Dismissal Letters). Public notice of the dismissals was given on March 18, 2002. See MMB ITFS Report No. 695, *Public Notice* (rel. Mar. 18, 2002).

²² Dismissal Letters at 2.

²³ *Id.* See 47 C.F.R. § 74.932.

²⁴ Petition at 1.

²⁵ *Id.*

²⁶ *Id.*

²⁷ See Hispanic Information and Telecommunications Network, Inc., *Order on Reconsideration*, 19 FCC Rcd 2829 (WTB BD 2004) (*B Group Order*); See Hispanic Information and Telecommunications Network, Inc., *Order on Reconsideration*, 19 FCC Rcd 2834 (WTB BD 2004) (*D Group Order*).

²⁸ *B Group Order*, 19 FCC Rcd at 2831 ¶ 7; *D Group Order*, 19 FCC Rcd at 2836 ¶ 7.

²⁹ *B Group Order*, 19 FCC Rcd at 2832 ¶ 9; *D Group Order*, 19 FCC Rcd at 2837 ¶ 9.

rules.³⁰ The Division also concluded that the pleadings filed by Petitioners were not “strike pleadings” in violation of the Commission’s general practice rules governing pleadings.³¹ On March 22, 2004, HITN filed the instant AFR.³²

III. DISCUSSION

9. HITN’s application for review raises three issues: (1) whether a non-local ITFS applicant’s failure to provide a useable signal to its qualifying receive sites constitutes a valid basis for dismissing an ITFS application; (2) what the correct standard is for determining whether an ITFS applicant is providing a useable signal at its proposed receive sites, and (3) whether HITN complied with the applicable standard. We resolve each of these issues adversely to HITN, affirm the Division’s conclusion that HITN’s application was defective, and deny the AFR.

10. *Need to provide usable signal to receive sites.* HITN argues that nothing in the Commission’s Rules required it to protect its receive sites from interference from other stations.³³ Specifically, HITN contends that nothing in Section 74.903 of the Commission’s Rules addresses interference from other stations to an applicant’s receive sites.³⁴ It also argues that nothing in Section 74.932 of the Commission’s Rules supports the dismissal of its applications because nothing in that rule addresses an applicant’s technical proposal.³⁵

11. We conclude that the Division properly analyzed the rules at issue. Section 74.932(a) of the Commission’s Rules states, in relevant part, that an ITFS license “will be issued only to an accredited institution or to a governmental organization engaged in the formal education of enrolled students or to a nonprofit organization....”³⁶ An applicant who seeks to establish its ITFS license eligibility by providing service to accredited institutional or governmental organizations “must submit documentation from proposed receive sites demonstrating that they will receive and use the applicant’s educational usage.”³⁷ If the receive sites are unable to receive an applicant’s signal because of interference from another station, the applicant cannot demonstrate compliance with Section 74.932(a) because the receive site will not be able to receive and use the applicant’s educational programming. HITN does not attempt to explain how it would be logical to allow an applicant to demonstrate its eligibility by obtaining a letter from an organization that could never receive the applicant’s signal. Accordingly, we affirm that HITN was required to obtain a letter from an accredited organization that would actually be able to use or receive its proposed signal.³⁸

³⁰ *B Group Order*, 19 FCC Rcd at 2832 ¶ 10; *D Group Order*, 19 FCC Rcd at 2837 ¶ 10.

³¹ *B Group Order*, 19 FCC Rcd at 2832-33 ¶ 11; *D Group Order*, 19 FCC Rcd at 2837-38 ¶ 11.

³² *See* AFR.

³³ *Id.* at 5.

³⁴ *Id.* at 5-8.

³⁵ *Id.* at 8-10.

³⁶ 47 C.F.R. § 74.932(a).

³⁷ 47 C.F.R. § 74.932(a)(4). *See, e.g.,* *Zion Lutheran School et al., Memorandum Opinion and Order*, 8 FCC Rcd 3606 ¶ 3 (1993) (stating that by failing to submit the appropriate letter of intended use, the applicant fails to demonstrate its qualifications and the application must be dismissed).

³⁸ HITN is correct that it was not initially required to make an affirmative engineering showing in its application that it would provide a useable signal to the receive sites. However, in light of the questions raised by the Petitioners, and our conclusion that HITN’s own engineering study demonstrates that it cannot serve its proposed receive sites, HITN’s application was defective and was properly dismissed.

12. *Standard for determining a “useable signal.”* The Division concluded that HITN would not provide a useable signal to its receive sites because, under Section 74.903(a)(1) of the Commission’s Rules, “interference is deemed present when the ratio of the desired-to-undesired signal is less than 45 dB.”³⁹ HITN argues that Section 74.903(a)(1) only applies to an applicant’s causing interference to the receive sites if previously licensed or applied for stations.⁴⁰ HITN explains that “in 1984, the Commission set forth with regard to the ITFS service, that a minimally acceptable picture was to be defined as one receiving a grade of 4 as judged by 50% of those viewing the picture using the scale established in 1959 by the Television Study Organization (“TASO”), and that a TASO grade 4 corresponds to a 23 dB signal to noise ratio.”⁴¹ HITN argues that without a specific requirement in Section 74.903 as to the protection of one’s own receive sites, the applicable standard would be one that provides a “minimally acceptable picture,” which the Commission has defined as a 23 dB signal-to-noise ratio.⁴² HITN says that at least three of its proposed receive sites would be sufficient under the 23 dB standard, and all four sites would be sufficient with the use of improved receiving antennas or digital modulation.⁴³

13. We disagree that only the 23 dB signal-to-noise ratio should apply here, and instead we apply the D/U ratio of 45 dB. The signal-to-noise ratio HITN relies on is different than the desired-to-undesired signal ratio contained in the Commission’s Rules. Noise is the collective energy radiated from non-specific sources. Radio noise is analogous to the white audio noise that is present in a room where one person (sender) is speaking to another (receiver). The sender must speak above the white noise so that his message can be received and understood. HITN’s argument would be valid if there were no other radiating sources to be considered. In this case, there are co-channel radiating sources (Stations WLX322 and WLX323) in close proximity to HITN’s proposed stations. These radiating sources’ signal are much stronger and pervasive than the noise discussed by HITN. This co-channel radiation is analogous to another/different sender (undesired), in the same room, trying to talk to the same receiver/person that the original sender (desired) is speaking to. The desired-to-undesired signal ratio is analogous to how much louder the original sender (the desired signal) must speak so that his message can be received over the other speaker (the undesired signal).

14. In radio terms, Section 74.903(a)(1) of the Commission’s Rules defines co-channel interference as being present when the desired signal is less than 45 dB stronger than the undesired signal. Section 74.903(a)(1) of the Rules specifically states that “[h]armful interference will be considered present when a calculation using a terrain sensitive signal propagation model determines that this ratio [*i.e.*, the ratio of the desired signal to the undesired signal] is less than 45 dB.”⁴⁴ The 23 dB signal-to-noise ratio cited by HITN does not appear anywhere in the Part 74 rules. Moreover, in reviewing the *First Report and Order*, it is apparent that the 23 dB signal-to-noise ratio discussed by the Commission was not used to define interference between two stations. Instead, the Commission used the 23 dB signal-to-noise ratio to determine the minimum acceptable signal level as the first step in calculating the proper

³⁹ *B Group Order*, 19 FCC Rcd at 2831 ¶ 8, *D Group Order*, 19 FCC Rcd at 2836 ¶ 8.

⁴⁰ AFR at 10-11.

⁴¹ *Id.* at 11, *citing* Amendment of Parts 21, 74 and 94 of the Commission Rules and Regulations with regard to the technical requirements applicable to the Multipoint Distribution Service, the Instructional Television Fixed Service and the Private Operational-Fixed Microwave Service (OFS); GN Docket No. 80-113, *First Report and Order*, 98 FCC 2d 68, 93-94 ¶¶ 68-72 (1984).

⁴² AFR at 10-11.

⁴³ *Id.* at 11.

⁴⁴ 47 C.F.R. §§ 74.903, 74.932.

size protected service area for MDS stations.⁴⁵ Section 74.903(a)(1) clearly defines interference in terms of the ratio of the desired signal to the undesired signal, as opposed to the signal-to-noise ratio. Moreover, HITN does not cite any precedent or Commission guidance that states that the 23 dB signal-to-noise ratio is the applicable standard for determining whether an applicant can serve its receive sites. We therefore affirm the Division's conclusion that the standard for determining whether HITN can provide a useable signal to its receive sites is whether the D/U ratio at the receive sites is equal to or greater than 45 dB.

15. *Does HITN comply with the 45 dB D/U ratio standard at the Robinson School receive site?* Even if Section 74.903 does apply, HITN argues that it would be able to meet the 45 dB D/U ratio.⁴⁶ According to HITN, upgrading to an enhanced performance antenna such as the Mark MHP-25A120 would yield a significant increase in the signal-to-noise and desired-to-undesired signal ratios at the proposed receive sites.⁴⁷ HITN claims that at least one receive site, Robinson School, would achieve a 45.9 dB desired-to-undesired protection ratio with the antenna upgrade.⁴⁸

16. We conclude that HITN would not be able to meet the required 45 dB desired-to-undesired ratio at the Robinson School receive site. While HITN claims that an antenna upgrade would achieve the required desired-to-undesired ratio at the Robinson School receive site, we conclude, based upon our review of HITN's showing, that the actual D/U ratio using the Mark MHP-25A120 antenna would be 41.9 dB, not the 45.9 dB ratio alleged by HITN. There is an error in HITN's calculations. In its showing, HITN listed the original reference antenna's discrimination rate as 36.0 dB, and its D/U ratio as 19.1 dB. HITN listed the proposed Mark MHP-25A120 antenna's discrimination rate as 58.8 dB. The difference between the two discrimination figures (58.8 and 36.0) is 22.8. When 22.8 dB is added to the original reference antenna's D/U ratio of 19.1, the new D/U ratio for the upgraded antenna is 41.9 dB, which falls short of the 45 dB requirement.

17. We also reject HITN's argument that, pursuant to Section 74.903(b)(4) of the Commission's Rules, the receive sites can consent to the interference from other stations. As noted above, HITN's applications are defective because they do not comply with Section 74.932 of the Commission's Rules. The only relevance of Section 74.903(a) is that this section defines interference for the purpose of determining whether HITN's proposed receive sites can receive and use HITN's proposed signals. Section 74.903(b)(4) of the Commission's Rules only applies when a pre-existing licensee or applicant is willing to accept interference from an applicant. It would be totally inconsistent with the underlying purposes of the eligibility criteria to allow HITN to become eligible when HITN would not be providing a useable signal to the organizations that formed the basis for HITN's eligibility. In any event, HITN never provided any such consent letters from the organizations at issue.

18. Lastly, HITN accuses the Branch and Division of "unreasonably seek[ing] to prevent the introduction of new and valuable services to the public."⁴⁹ HITN says it has demonstrated that the Petitioners' concerns have been met and that its proposal is technically feasible.⁵⁰ Therefore, HITN states

⁴⁵ *First Report and Order*, 98 FCC 2d at 94 ¶ 68 ("The first issue to be resolved in determining the needed signal level, and hence the protected serviced area boundary, is what constitutes a minimally acceptable picture.")

⁴⁶ AFR at 12.

⁴⁷ *Id.* at 14.

⁴⁸ *Id.*

⁴⁹ AFR at 16.

⁵⁰ *Id.* at 17.

that the Division's decision in its Orders on Reconsideration "must be reversed as arbitrary and capricious and at odds with the Commission's rules and policies."⁵¹

19. We disagree. HITN's application does not comply with the eligibility criteria because it cannot provide a useable signal to the proposed receive sites that form the basis for its eligibility.⁵² A Commission decision is arbitrary and capricious if it is "a substantive change of the Commission's rules"⁵³ or "ignores prior Commission decisions."⁵⁴ The decision to deny HITN's application does not ignore prior Commission decisions; instead, it follows the precedent of denying licenses to applicants failing to meet the requirements of the rules.⁵⁵ The Branch's and Division's rulings were fully consistent with the Commission's Rules.⁵⁶

IV. CONCLUSION AND ORDERING CLAUSE

20. In consideration of the record before us, we find that the Branch correctly dismissed HITN's applications for authority to construct new ITFS stations to operate on the B Group channels and D Group channels at Luquillo, Puerto Rico. Our conclusion is based on the findings that HITN would be unable to serve its receive sites due to interference from other stations, thus failing to qualify as an ITFS licensee.

21. ACCORDINGLY, IT IS ORDERED, pursuant to Sections 4(i) and 5(c) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 155(c) and Sections 1.115 and 74.932 of the Commission's rules, 47 C.F.R. §§ 1.115, 74.932, the Consolidated Application for Review filed by Hispanic Information and Telecommunications Network, Inc. on March 22, 2004 **IS DENIED**.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

⁵¹ *Id.* at 18.

⁵² *See* 47 C.F.R. § 74.932.

⁵³ *See, e.g.,* Pojoaque High School, *Order on Reconsideration*, 18 FCC Rcd 19304, 19308 ¶ 8 (WTB PSPWD 2003), *application for review pending*.

⁵⁴ *See, e.g.,* Broadwave USA, *Fourth Memorandum Opinion and Order*, 18 FCC Rcd 8428, 8435 ¶ 14 (WTB 2003).

⁵⁵ *See, e.g.,* Hispanic Information and Telecommunications Network, *Memorandum Opinion and Order*, 19 FCC Rcd 814, 818 ¶ 12 (2004) (stating that the Commission correctly denied HITN's application for failing to provide documentation that an antenna upgrade would satisfy the 45 dB direct-to-indirect ratio of § 74.903); Zion Lutheran School, 8 FCC Rcd at 3606 ¶ 3 (dismissing Tyco Christian's application for failure to demonstrate that an accredited school was aware of Tyco Christian's instructional programming and willing to incorporate it into the curriculum, which would fulfill § 74.932(a)'s "receive and use" requirement).

⁵⁶ *See* 47 C.F.R. §§ 74.903, 74.932.