

November 14, 2002

Marlene H. Dortch
Secretary
Federal Communications Commission
Washington, DC 20554

Re: *Proposal by the Wireless Communications Association International, Inc., the National ITFS Association and the Catholic Television Network for Revising the MDS and ITFS Regulatory Regime -- RM 10586*

Dear Ms. Dortch:

On behalf of the Wireless Communications Association International ("WCA"), the National ITFS Association ("NIA"), and the Catholic Television Network ("CTN"), we hand you herewith a supplement to the white paper that WCA, NIA and CTN filed on October 7, 2002 proposing various changes to the Multipoint Distribution Service ("MDS") and Instructional Television Fixed Service ("ITFS") regulatory regime. This supplement provides the Commission with specific proposals regarding issues that the white paper identified as being the subject of ongoing discussion within the industry and seeks to respond to a handful of concerns that have been raised in the weeks since the white paper was filed.

Should you have any questions regarding this submission, please contact the undersigned.

Respectfully submitted,

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Marlene H. Dortch
November 14, 2002
Page 2

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FIRST SUPPLEMENT TO “A PROPOSAL FOR REVISING THE MDS AND ITFS REGULATORY REGIME”

On October 7, 2002, the Wireless Communications Association International, Inc. (“WCA”), the National ITFS Association (“NIA”) and the Catholic Television Network (“CTN”) submitted a white paper to assist the Wireless Telecommunications Bureau staff in its efforts to revise the rules and policies governing the Multipoint Distribution Service (“MDS”) and Instructional Television Fixed Service (“ITFS”).¹ Within the white paper, WCA, NIA and CTN indicated that there were several issues, primarily of a technical nature, that were still being evaluated. This first supplement to the white paper is submitted to report on the substantial progress WCA, NIA and CTN have made in resolving several of those open issues and to address a few concerns that have been expressed within the industry subsequent to the filing of the white paper.

A. The Rules Applicable To Transition Band Channels

In the white paper, WCA, NIA and CTN explained that while they are in agreement that operations in the Transition Bands (the J and K channels) must be secondary to operations in the LBS, MBS and UBS (*i.e.* absent agreement otherwise, they may not cause any interference and they must accept any interference), they had been unable to agree upon appropriate licensing and operating rules to govern those channels in a manner that assured interference-free operation of adjacent channels.² WCA, NIA and CTN have subsequently agreed upon specific rules for the use of the J and K channels that will accomplish their objective.

Specifically, WCA, NIA and CTN propose that the Commission allow usage of the J and K channels without licensing of individual facilities, subject to two fundamental restrictions (in addition to the more general caveat that operations on these channels are secondary relative to operations in the LBS, MBS and UBS). First, absent the consent of the neighboring³ D3 and A4 channel licensee in the case of a J channel or the consent of the neighboring G4 and E1 licensee in the case of a K channel, licensees in the J and K channels should be required to attenuate emissions outside their authorized bandwidth to $90+10\text{Log}(P)$, where P equals the transmitter

¹ “A Proposal To Revise The MDS and ITFS Regulatory Regime,” Wireless Communications Ass’n Int’l, Nat’l ITFS Ass’n and Catholic Television Network, RM-10586 (filed Oct. 7, 2002)[“White Paper”]. Ten days later, the Wireless Telecommunications Bureau issued a *Public Notice* soliciting public comment on the white paper. See “Wireless Telecommunications Bureau Seeks Comment on Proposal to Revise Multichannel Multipoint Distribution Service and the Instructional Television Fixed Service Rules,” *Public Notice*, DA 02-2732, RM-10586 (rel. Oct. 17, 2002).

² The white paper did propose that J and K channel licensees limit their signal strength to no greater than 47 dB μ V/m (measured 1.5 meters above ground level) beyond the borders of their GSAs. See White Paper, at 26-27. As discussed *infra* in Section C, WCA, NIA and CTN are now proposing that the Commission make clear that the 47 dB μ V/m signal strength limit is to be measured over the LBS/UBS bandwidth of 5.5 MHz and adjusted when different bandwidths are employed. In the case of the 500 kHz J and K channels, the limit needs to be adjusted to 36.6 dB μ V/m to compensate for the smaller 500 kHz standard bandwidth.

³ For purposes of this proposal, a licensee is considered to be “neighboring” to another licensee if the GSAs of those licensees overlap in whole or in part.

output power in watts.⁴ This attenuation will provide substantial protection against out-of-band emissions interfering with operations in the LBS, MBS and UBS. WCA, NIA and CTN believe that, even though the J and K channels will be designated as secondary relative to the LBS, MBS and UBS, a restrictive limit on out-of-band emissions is essential because as a practical matter it may be difficult for LBS, MBS and UBS licensees to identify and police sources of interference from secondary portable and mobile operations on the J and K channels.

Second, WCA, NIA and CTN suggest that absent the consent of the neighboring A4 channel licensee in the case of a J channel or the consent of the neighboring G4 licensee in the case of a K channel, a J or K channel licensee be required to restrict its EIRP to -40.34 dBm EIRP within a 500 kHz channel. While WCA, NIA and CTN appreciate that this limit is substantially more restrictive than those placed on the other segments of the MDS/ITFS band, it is necessary to assure interference-free operations in the MBS. The -40.34 dBm EIRP limit is designed to assure that even under a worst-case analysis, an ITFS receive site will receive a 0 dB desired-to-undesired (“D/U”) signal level ratio. As discussed at page 37 of the white paper, only ITFS receive sites with a minimum received signal level of -80 dBm in a 6 MHz bandwidth are entitled to protection. To provide an ITFS receive site receiving a signal of -80 dBm with 0 dB D/U protection from a J or K channel unit located within 100 feet of the ITFS reception antenna requires that the J or K system operate at no greater than -40.34 dBm EIRP. Using a free space model, path loss over 100 feet was calculated as 70.45 dB using the formula $30.45+20\log(d_{\text{feet}})$ dB. A maximum permissible EIRP over a 6 MHz channel of -29.55 dBm was then calculated using the formula $\text{EIRP}=-80-G_r+70.45$. That maximum EIRP was then adjusted for the 500 kHz bandwidth of the Transition Band channels by applying the formula $-29.55+10\log(500/6000)$, yielding a maximum EIRP of -40.34 dBm. Because the EIRP limit is solely for the benefit of the MBS channel licensees directly adjacent to the Transition Bands, those MBS licensees should be permitted to consent to EIRP levels on the J and K channels that exceed the -40.34 dBm EIRP limit.

B. Spectral Mask for Consumer Equipment On The LBS And UBS Bands.

In the white paper, WCA, NIA and CTN recommended that that MDS/ITFS equipment should be designed such that on any frequency outside a licensee’s frequency block (*i.e.* the block of continuous channels licensed to a given licensee), the power of any emission outside the block should be attenuated below the transmitter power (P) by at least $43 + 10 \log (P)$ dB, measured in watts, unless otherwise agreed by the affected licensee. However, WCA, NIA and CTN explained that “even with the proposed mask, there is potential for interference between customer equipment operating in close proximity on non-coordinated, adjacent channel systems” and advised the Commission that they would be exploring possible additional restrictions.⁵

⁴ As with all spectral masks being proposed by WCA, NIA and CTN, this mask should apply only at the edges of contiguous channels owned or leased by a single system operator and should be capable of being waived by adjacent J and K channel licensees.

⁵ See White Paper, at 29-30.

Based on analyses conducted by the WCA Technical Task Group, WCA, NIA and CTN suggest that their proposed mask be revised slightly. Specifically, it is suggested that any emission by an LBS or UBS licensee should be attenuated below the transmitter power (P) by at least $43 + 10 \log (P)$ dB, measured in watts, from the edge of the frequency block to 5.5 MHz from that edge, and should thereafter be attenuated by at least $55 + 10 \log (P)$ dB.⁶

The spectral mask WCA, NIA and CTN are today proposing for MDS/ITFS customer equipment is somewhat more stringent than that imposed on broadband PCS,⁷ the lower 700 MHz band WCS,⁸ and the new WCS services established in the *27 MHz Proceeding*.⁹ Nonetheless, WCA, NIA and CTN believe that the proposed mask is necessary to facilitate flexible use of the LBS and UBS by different technologies, and strikes an appropriate balance – it is neither so stringent that it cannot be achieved without undue cost nor is it so loose as to jeopardize service.¹⁰

C. Measurement Of Signal Strength For Purposes Of Compliance With Limit Beyond The GSA Border For Non-MBS Channel Operations.

In the white paper, WCA, NIA and CTN proposed that each licensee of the non-MBS channels be required to limit its signal level to no greater than 47 dB μ V/m beyond its GSA.¹¹ As they explained at the time, this signal level appears to be the minimum that will limit potentially disruptive signals into an adjoining service area, while at the same time permitting a licensee to

⁶ The Commission should require that all measurements relating to MDS/ITFS out-of-band emission limits be taken consistent with the provisions of Section 24.238(b) of the Rules, which applies to the broadband PCS mask. *See* 47 C.F.R. §24.238(b) (“Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.”). In addition, consistent with the provisions of Section 24.238(c) and (d) and Section 27.53(a)(6) and (7), the WCS spectral mask, the MDS/ITFS rule should provide that “when measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the licensee’s frequency block edges, both upper and lower, as the design permits” and that “the measurements of emission power can be expressed in peak or average values, provided they are expressed in the same parameters as the transmitter power.”

⁷ *See* 47 C.F.R. § 24.238(a).

⁸ *See Reallocation and Service Rules for the 698-746 MHz Spectrum Band (Television Channels 52-59)*, 17 FCC Rcd 1022, 1069 (2002) [“Lower 700 MHz R&O”].

⁹ *Amendments to Parts 1, 2, 27 and 90 of the Commission’s Rules to License Services in the 216-220 MHz, 1390-1395 MHz, 1427-1429 MHz, 1429-1432 MHz, 1432-1435 MHz, 1670-1675 MHz, and 2385-2390 MHz Government Transfer Bands*, 17 FCC Rcd 9980, 10030-32 (2002) [“27 MHz R&O”].

¹⁰ *See id.* at 10030-31. Note that this mask is not to be confused with the operation emission mask of -37 dBm EIRP in 6 MHz (if the protected MBS channel is analog) or -20 dBm EIRP in 6 MHz (if the protect MBS channel is digital) that is intended to protect 6 MHz wide channels in the MBS from out-of-band emissions from operations in the LBS, J, K and UBS bands. *See White Paper*, at 30.

¹¹ *See White Paper*, at 26-27. *See also*, e.g. 47 C.F.R. § 27.55 (WCS); §24.236 (PCS).

substantially serve its GSA, including areas near the border. WCA, NIA and CTN have subsequently learned, however, that its proposal has engendered some confusion within the MDS/ITFS community because it did not specify the resolution bandwidth over which compliance is to be measured. To eliminate any confusion, the Commission should clarify that the field strength limit of 47 dB μ V/m is to be measured over a 5.5 MHz bandwidth (*i.e.* the bandwidth of an LBS/UBS channel) and that operations over different sized channels should be adjusted by applying a factor of $10 \log[(\text{actual bandwidth MHz})/(5.5 \text{ MHz})]$.

D. The Proposed Rules For Identifying MVPDs Entitled To Opt Out Of A Transition.

At pages 16 through 18 of Appendix B, WCA, NIA and CTN proposed that Multichannel Video Program Distributors (“MVPDs”) that serve at least 5% of the households within their GSAs be entitled to “opt-out” of the transition.¹² Although this proposal was approved in the first instance by the operators of the vast majority of video systems currently operating in the United States, it subsequently drew concern from a handful of MVPDs. To alleviate some of those concerns, WCA, NIA and CTN propose two modifications to the “opt-out” rules.

First, following the filing of the white paper, it was brought to the attention of WCA, NIA and CTN that the proposed limits on eligibility to invoke the MVPD “opt-out” provisions could prove unduly harsh to the few MVPD system operators that have recently deployed digital technology over MDS/ITFS channels. Under the initial proposal, only an MVPD system serving 5% of the households in its GSA is entitled to “opt-out” – smaller MVPD systems will be required either to secure consents from neighboring licensees or adjust their operations to conform to the post-transition technical rules. In crafting Appendix B, WCA, NIA and CTN were strongly influenced by the fact that virtually all of the current MVPD systems could continue their current service offerings (and, in most cases, materially increase the number of program tracks offered to subscribers) by digitizing the seven 6 MHz channels that will be in the MBS following a transition – channels that can continue to operate on a high-power, high-site basis under the proposed new rules. Those MDS/ITFS systems that currently provide MVPD service utilizing digital compression technology are realizing compression ratios on the order of 8:1 (*i.e.* eight video programming tracks are being transmitted on a single 6 MHz channel) and beyond. Thus, an analog MVPD system that today utilizes all 31 channels in the 2.5 GHz band could provide the same number of program tracks utilizing just 4 digitized MBS channels

¹² One other issue regarding Appendix B has arisen. One party has read certain portions of Appendix B to suggest that a Proponent’s Transition Plan can freely assign to a given licensee any number of MBS channels, so long as the licensee receives the same number of channels as it possessed prior to the transition. That certainly is not what WCA, NIA and CTN are proposing. To the contrary, absent agreement otherwise, as a general proposition a given licensee will receive the specific channels identified in Attachment 1 to Appendix B. The only exception is that where an ITFS licensee requests more than one program track in the MBS, the Transition Plan may, in the Proponent’s discretion, call for that ITFS licensee to receive in the MBS no more than one 6 MHz channel for each program track requested. Where a Proponent chooses to meet its obligation to the ITFS licensee (rather than through digitization), Appendix B calls for the ITFS licensee to receive fewer LBS/UBS and Transition Band channels. However, the choice is entirely up to the ITFS licensee whether to request more than one program track in the MBS.

following a transition, or, put another way, could provide 56 channels of digital programming on the MBS channels alone.

However, WCA, NIA and CTN recognize that a system that currently utilizes more than seven 6 MHz channels for the transmission of digitally compressed video programming does not have the option of just using MBS channels – to continue its current service offering requires more high-power, high-site channels than are allocated to the MBS. Because a few system operators have recently digitized their video services and have been marketing those services with some success (although perhaps not yet reaching the 5% “opt-out” benchmark proposed by WCA, NIA and CTN), WCA, NIA and CTN believe that special provisions are appropriate. Thus, they are proposing that any MVPD system that as of October 7, 2002 (the date the white paper was filed) was utilizing more than seven MDS/ITFS channels for the transmission of digitally compressed video programming to subscribers should be able to invoke the MVPD “opt-out” discussed in the white paper.

Second, there has been some concern expressed as to whether those subscribers who only receive Internet access service from an MVPD that offers both video programming and Internet access should be counted towards the 5% benchmark. Appendix B did not specifically address that issue and, to eliminate any concern, WCA, NIA and CTN believe that all subscribers to an MVPD system should be counted towards the benchmark, including those that only subscribe to an Internet access service.

E. The Commission Should Immediately Suspend Enforcement of All Outstanding Construction Requirements And All Requirements That Licensees Continue To Operate And Maintain Obsolete Facilities.

In the white paper, WCA, NIA and CTN called upon the Commission to immediately suspend the MDS BTA build-out deadline set forth in Section 21.930 of the Commission’s rules until such time as it has had an opportunity to rule upon their request that the provisions of Section 21.930 be replaced by a rule requiring MDS BTA authorization holders to demonstrate at renewal time that they provided substantial service during their license term.¹³ As they noted, the public interest will be far better served by allowing licensees to preserve scarce capital for the

¹³ See White Paper, at 50-51. A critical component of the WCA/NIA/CTN proposal is that the Commission not merely examine the service that is being provided at the time of renewal, but instead consider whether substantial service was provided at any time during the license term. See *id.* at 46 n. 122. An essential element of the Commission’s flexible use policy is that licensee’s have the flexibility to change service offerings in response to marketplace demand. That policy will inevitably be compromised if renewal is based solely on a “snapshot” taken when the renewal application is filed. Licensees will inevitably be reluctant to migrate from one service to another when approaching renewal, regardless of marketplace demand, for fear that they will not be providing substantial service when the renewal application is filed. The approach advocated by WCA, NIA and CTN is more consistent with the Commission’s policy – it provides for renewal so long as the licensee can demonstrate that it provided substantial service at some point during the license term. Moreover, the WCA/NIA/CTN proposal accommodates the fact that under Appendix B to the white paper, a given BTA authorization holder may be forced to diminish or discontinue service as the result of a transition being implemented by a neighboring licensee. See *id.* It would be patently unfair to deny renewal to a BTA authorization holder that had been providing substantial service, but was required to diminish or discontinue that service to accommodate a transition to the new bandplan.

construction of broadband facilities once a new regulatory regime is in place than requiring the construction of video facilities in the interim that, while satisfying Section 21.930, will be obsolete the moment they are deployed.¹⁴ The better course, consistent with Commission precedent, is to evaluate the merit of the proposals advanced in the white paper and, if the Commission does not ultimately adopt the substantial service proposal advanced by WCA, NIA and CTN, provide a reasonable opportunity for BTA authorization holders to meet whatever standard is adopted.¹⁵

For the same reasons, WCA, NIA and CTN now urge the Commission to immediately suspend the construction deadlines set forth in individual authorizations issued to incumbent MDS and ITFS licensees. In the white paper, the Commission has been urged to eliminate the current policy of affording incumbents relatively short periods of time to construct individual facilities and instead subject incumbents to the same substantial service requirement proposed for BTA authorization holders.¹⁶ Until the Commission has had an opportunity to address that proposal, it makes little sense to require licensees to construct obsolete video and first generation data facilities to maintain their authorizations when the Commission is on the verge of adopting new rules that will facilitate the deployment of advanced services. Moreover, a review of the Commission's records demonstrates that large numbers of applications being filed by MDS and ITFS licensees at this time involve requests for additional time to construct video and first generation facilities. Such applications would not be necessary if the suspension requested by WCA, NIA and CTN were implemented, and the Commission's staff could avoid the need to process over the next year what are likely to be numerous extension requests by licensees who want to deploy advanced services once a new regulatory regime is in place.

The same consideration also should lead the Commission to immediately suspend those provision of Sections 21.44(a)(3), 21.303 and 74.932(d) of the Commission's Rules that effectively force MDS and ITFS licensees to continue operating and maintaining obsolete facilities used to provide video or first generation data services, or else lose their licenses.¹⁷ As is discussed in the white paper, those provisions (or analogous Part 27 provisions) will have to be substantially modified to reflect the fact that the transition to next generation broadband services will require the discontinuance of existing services and the dismantling of existing facilities,

¹⁴ See *id.* at 46-47.

¹⁵ See *Requests by Interactive Video and Data Service Lottery Winners to Waive the March 28, 1997 Construction Deadline*, 12 FCC Rcd 3181 (1997); *Requests by Interactive Video and Data Service Auction Winners to Waive the January 18, 1998, and February 28, 1998, Construction Deadlines*, DA 98-59, ¶3 (rel. Jan. 14, 1998);

¹⁶ See *id.* at 43-50.

¹⁷ Under Section 21.44(a)(3) of the Commission's Rules, a license for an MDS station is automatically forfeited without further notice to the licensee upon the voluntary removal or alteration of the facilities so as to render the station not operational for a period of 30 days or more. Section 21.303 not only provides for a similar forfeiture, but also provides that if service from an MDS station is discontinued for a consecutive period of twelve months or longer, the licensee must surrender its license to the Commission for cancellation even if the station's facilities are not removed. Similarly, under Section 74.932(d), an ITFS station which is nonoperational for a period of one year is deemed to have been "permanently discontinued" and is subject to license forfeiture.

often for not insignificant periods of time.¹⁸ The irony here is that continued enforcement of these rules will inevitably delay the transition to next generation services, as they prevent licensees from today fully discontinuing services and dismantling facilities to prepare for the deployment of next generation services. As such, these rules are impossible to square with the concept of flexibility that the Commission is attempting to foster. If the public interest benefit of flexibility (allowing licensees to put spectrum to the highest and best use at any given time) is to be realized, the Commission cannot impose rules that effectively force the continuation of obsolete services. An immediate decision to suspend enforcement of Sections 21.44(a)(3), 21.303 and 74.932(d) pending action on the white paper will allow MDS and ITFS licensees to conserve resources currently being expended for no purpose other than to satisfy those rules and set the stage for MDS and ITFS licensees to bring advanced new wireless services to the public more rapidly once a new regulatory regime is in place for MDS/ITFS.

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¹⁸ See White Paper, App. B, at 4 n. 9.