

Before the  
**FEDERAL COMMUNICATIONS COMMISSION**  
Washington, DC 20554

Proposal by the Wireless Communications )  
Association International, Inc., the National ) RM 10586  
ITFS Association and the Catholic Television ) DA 02-2732  
Network for Revising the MDS and ITFS )  
Regulatory Regime )

To: Chief, Wireless Telecommunications Bureau

**REPLY COMMENTS OF WCA, NIA AND CTN**

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## EXECUTIVE SUMMARY

The white paper represented the culmination of months of work by the MDS and ITFS communities. Thus, it comes as no surprise that the white paper has engendered enthusiastic support from commercial interests, educators, the technical community, and the industry association representing rural telecommunications providers.

While some parties have offered suggestions that deserve further consideration, others have simply misinterpreted the white paper and their concerns can readily be resolved. In some cases, suggestions have been put forth that would undermine the carefully crafted balancing of competing interests reflected in the white paper in order to elevate one party's particular interests above all others. And, unfortunately, a few parties have made transparent efforts to address private disputes or to game the new rules in their favor.

In evaluating the comments, WCA, NIA and CTN urge the Commission to remember that the white paper represents a complex series of compromises among a variety of competing interests – TDD proponents vs. FDD proponents, emerging MDS broadband providers vs. legacy MDS video providers, ITFS licensees seeking to deploy portable and mobile data services vs. ITFS licensees more interested in preserving existing video operations, rural interests vs. urban interests, etc. That WCA, NIA and CTN (three organizations that have not always seen eye-to-eye) have been able to come to agreement, and then secure support from the overwhelming majority of the MDS/ITFS community, speaks volumes as to whether they have appropriately balanced these competing interests.

The comments strongly support the adoption of the new bandplan advocated in the white paper as a mechanism for providing physical separation between high-power, high-site downstream operations and two-way cellular services. Indeed, only one party supports retention

of the current bandplan. While some would make minor changes to the allocation of spectrum within the various segments of the new bandplan, the modifications they suggest would upset the careful balance the white paper achieves between competing interests. The important thing is the interests of virtually all parties can be reasonably accommodated without modifying the bandplan.

The comments also overwhelmingly support the proposals advanced by WCA, NIA and CTN for transitioning from the old bandplan to the new. While some of the commenting parties have advanced suggestions that may deserve further exploration, adoption of other alternative proposals advanced in the comments would likely result in undue delay in implementing transitions. The proposals advanced in the white paper have been carefully crafted to prevent greenmail, anticompetitive conduct, or “free riders,” and the Commission should take great care to assure that it incorporates appropriate protections against these evils.

The Commission should reject the call by small video operations for an expansion of MVPD “opt-out” rights to all video operations. Continued operation of these high-power, high-site facilities on channels outside the MBS will result in devastating cochannel interference to two-way cellular services in neighboring markets (usually, much larger neighboring markets). There are a variety of mechanisms available under the white paper by which these small systems can continue to operate even if not granted “opt-out” rights. That the operators of the vast majority of video systems that will not have “opt-out” rights nonetheless support the white paper speaks volumes.

The proposal in the white paper for establishing exclusive Geographic Service Areas also met with applause from the vast majority of those commenting. To the extent that some were

concerned that the proposal lacked flexibility, the white paper proposes that licensees be permitted to freely partition their service areas, allowing consenting licensees to agree amongst themselves on changes to the default boundaries established pursuant to Appendix A of the white paper.

The Commission should reject the proposal that it preclude eligible educators from utilizing funds provided by third parties to purchase ITFS spectrum at auction. Such funding will be essential for many educators to participate in future auctions of ITFS spectrum. Nor should this proceeding become a vehicle for the Commission to adjudicate the rights of licensees and system operators under spectrum leases. Proper determination of those rights will require a case-by-case analysis that is more appropriately done by the judicial system.

In light of the overwhelming support expressed in the responses to the *Public Notice*, the Commission should promptly issue a notice of proposed rulemaking proposing to adopt the rule changes proposed by WCA, NIA and CTN.

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**REPLY COMMENTS OF WCA, NIA AND CTN**

The Wireless Communications Association International, Inc. (“WCA”), the National ITFS Association (“NIA”) and the Catholic Television Network (“CTN”), by their attorneys, hereby submit their consolidated reply to the comments filed in response to the Wireless Telecommunications Bureau’s *Public Notice* soliciting comment on the white paper submitted by WCA, NIA and CTN proposing substantial changes to the regulatory regime imposed by the Commission on the Multipoint Distribution Service (“MDS”) and the Instructional Television Fixed Service (“ITFS”).<sup>1</sup>

**I. INTRODUCTION**

The filing of the white paper represented the culmination of months of work during which over one hundred entities involved in the MDS/ITFS industry devoted thousands of man-hours and untold financial resources towards the development of a regulatory regime that will permit the most efficient and effective use of the MDS/ITFS spectrum. The proposals advanced in the white paper were the subject of intense consideration and scrutiny by commercial system

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<sup>1</sup> “Wireless Telecommunications Bureau Seeks Comment On Proposal To Revise Multichannel Multipoint Distribution Service And The Instructional Television Fixed Service Rules,” *Public Notice*, DA 02-2732A, RM-10586 (rel. Oct. 17, 2002). On November 14, 2002, the Bureau released a *Public Notice* extending the comment deadline to November 21, 2002 and the reply comment deadline to November 29, 2002 as a result of an unavailability of the Electronic Comment Filing System.

operators, MDS and ITFS licensees,<sup>2</sup> engineering consultants, lawyers, equipment vendors with fixed and mobile experience and the leadership of WCA, NIA and CTN. Thus, it comes as no surprise that the white paper has engendered enthusiastic support from commercial interests,<sup>3</sup> educators,<sup>4</sup> the technical community,<sup>5</sup> and the industry association representing rural telecommunications providers.<sup>6</sup> As one of the leading developers of second generation MDS/ITFS two-way broadband technology put it:

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<sup>2</sup> While comments were filed by the so-called ‘MMDS Licensee Coalition’ (“MLC”) contending that “the White Paper does not necessarily represent the views of many smaller MDS licensees,” the fact is that WCA’s membership includes a wide range of licensees from the nation’s largest to holders of a single license. See Comments of MMDS Licensee Coalition, RM-10586, at 1 (filed Nov. 14, 2002)(“MMDS Licensee Comments”). Significantly, MLC does not identify a single MDS licensee that it represents.

<sup>3</sup> See Comments of BellSouth and BellSouth Wireless Cable, RM-10586 (filed Nov. 14, 2002)(“BellSouth Comments”); Comments of Clearwire Technologies, RM-10586 (filed Nov. 14, 2002); Comments of CNI Wireless, RM-10586 (filed Nov. 14, 2002)(“CNI Comments”); Comments of Digital TV One, RM-10586 (filed Nov. 21, 2002)(“Digital TV One Comments”); Comments of IT&E Overseas, RM-10586 (filed Nov. 14, 2002); Comments of Maui Sky Fiber, RM-10586 (filed Nov. 21, 2002); Comments of Nucentrix Broadband Networks, Inc., RM-10586 (filed Nov. 14, 2002)(“Nucentrix Comments”); Comments of Sprint, RM-10586 (filed Nov. 14, 2002)(“Sprint Comments”); Letter from Thomas Knippen, W.A.T.C.H. TV, to Marlene H. Dortch, RM-10586, at 1 (filed Nov. 14, 2002)(“WATCH TV Comments”); Comments of Winbeam, RM-10586 (filed Nov. 14, 2002); Comments of WorldCom Broadband Solutions, RM-10586 (filed Nov. 14, 2002)(“WorldCom Comments”).

<sup>4</sup> See Joint Comments of Akron City School District and 45 Other ITFS Licensees, RM-10586 (filed Nov. 14, 2002)(“Joint ITFS Comments”); Comments of Atlanta Educational Services, *et al*, RM-10586 (filed Nov. 21, 2002)(“Atlanta ITFS Comments”); Comments of Archdiocese of Chicago, RM-10586 (filed Nov. 14, 2002); Comments of Archdiocese of Hartford, RM-10586 (filed Nov. 14, 2002); Comments of Archdiocese of Los Angeles, RM-10586 (filed Nov. 14, 2002); Comments of Archdiocese of Detroit, RM-10586 (filed Nov. 14, 2002); Comments of Catholic Telemedia Network, RM-10586 (filed Nov. 14, 2002); Comments of Caritas Telecommunications, RM-10586 (filed Nov. 14, 2002); Comments of Colorado State University, RM-10586 (filed Nov. 19, 2002); Comments of Counterpoint Communications, RM-10586 (filed Nov. 20, 2002); Comments of Department of Education, Archdiocese of New York, RM-10586 (filed Nov. 14, 2002); Comments of Diocese of Dallas, RM-10586 (filed Nov. 14, 2002); Comments of Diocese of Orange, RM-10586 (filed Nov. 14, 2002); Comments of Roman Catholic Diocese of Rockville Centre, RM-10586 (filed Nov. 14, 2002); Comments of Texas State Technical College, RM-10586 (filed Nov. 21, 2002)(“TSTC Comments”); Comments of the University of Colorado, RM-10586 (filed Nov. 20, 2002)(“University of Colorado Comments”).

<sup>5</sup> See Comments of Clearwire Equipment, RM-10586 (filed Nov. 14, 2002); Comments of ComSpec, RM-10586 (filed Nov. 21, 2002); Comments of IPWireless, Inc., RM-10586 (filed Nov. 14, 2002)(“IPWireless Comments”); Comments of Kessler & Gehman, RM-10586 (filed Nov. 14, 2002); Comments of Navini Networks, RM-10586 (filed Nov. 14, 2002)(“Navini Comments”); Comments of Nokia, RM-10586 (filed Nov. 21, 2002); Comments of QUALCOMM, RM-10586 (filed Nov. 14, 2002).

<sup>6</sup> Comments of the National Telecommunications Cooperative Ass’n, RM-10586 (filed Nov. 14, 2002)(“NTCA Comments”).

Given the significant cooperation between all affected parties – MDS and ITFS licensees, and manufacturers of equipment for these services – it appears that many of the traditional concerns of these communities have been reconciled in a manner that should pave the way for expeditious Commission approval.<sup>7</sup>

As a practical matter, no proposal as far-reaching as that advanced by WCA, NIA and CTN is likely to garner universal support. It is no surprise that a few parties expressed concerns regarding some of the specific proposals advanced in the white paper. While some parties have offered suggestions that deserve further consideration, others have simply misinterpreted the white paper and their concerns can readily be resolved.<sup>8</sup> In some cases, suggestions have been put forth that would undermine the carefully crafted balancing of competing interests reflected in the white paper in order to elevate one party's particular interests above all others. And,

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<sup>7</sup> Navini Comments, at 2.

<sup>8</sup> For example, the ITFS Spectrum Development Alliance (“SDA”) complains that WCA, NIA and CTN failed to propose elimination of Section 74.932(d) of the Rules, which requires ITFS licensees to forfeit channels that go unused for more than twelve months. *See* Comments of ITFS Spectrum Development Alliance, RM-10586, at 10 (filed Nov. 21, 2002)(“SDA Comments”). In fact, the white paper specifically called for the Commission to either eliminate this requirement or to issue a blanket waiver in connection with the transition process. *See* White Paper, App. B, at 4 n.9. And, in their First Supplement to the white paper, WCA, NIA and CTN specifically called on 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. 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, often for not insignificant periods of time. 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.

First Supplement to “A Proposal For Revising The MDS And ITFS Regulatory Regime,” RM-10586 (filed Nov. 14, 2002)(“First Supplement”).

unfortunately, a few parties have made transparent efforts to address private disputes<sup>9</sup> or to game the new rules in their favor. The remainder of these reply comments will be devoted to addressing the most significant of the concerns expressed by commenting parties.<sup>10</sup>

In evaluating the comments, WCA, NIA and CTN urge the Commission to remember that the white paper represents a complex series of compromises among a variety of competing interests – TDD proponents vs. FDD proponents, emerging MDS broadband providers vs. legacy MDS video providers, ITFS licensees seeking to deploy portable and mobile data services vs. ITFS licensees more interested in preserving existing video operations, rural interests vs. urban interests, etc. That WCA, NIA and CTN (three organizations that have not always seen eye-to-eye) have been able to come to agreement, and then secure support from the overwhelming majority of the MDS/ITFS community, speaks volumes as to whether they have appropriately balanced these competing interests. Indeed, a group of over 45 leading ITFS licensees explicitly urged the Commission:

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<sup>9</sup> For example, SDA seeks to draw the entire MDS/ITFS industry into a dispute one of its members is having relocating a single station in Philadelphia. *See* SDA Comments, at 5-6. In addition, Dallas MDS Partners (“Dallas MDS”) addresses the implications that the white paper would have on a dispute in which it is currently enmeshed involving the right of a grandfathered ITFS licensee to assign its authorization. *See* Comments of Dallas MDS Partners, RM-10586, at 3-6 (filed Nov. 21, 2002)(“Dallas MDS Comments”). However, it appears that Dallas MDS has misread the white paper. WCA, NIA and CTN have not expressed any view either as to whether the Commission should eliminate all restrictions on grandfathered ITFS licensees or as to whether in circumstances such as those presented in Dallas (where the assignment is to the BTA authorization holder) an exception to the general policy is warranted. All that the white paper calls for is that grandfathered ITFS licensees be entitled to secure exclusive GSAs and that they be freed from the technical restrictions that precluded them from deploying the types of facilities that are necessary to take full advantage of the new bandplan. *See* White Paper, at 51 (“WCA, NIA and CTN urge the Commission to eliminate the current policy of restricting the technical modifications that a so-called “grandfathered” E or F Group ITFS licensee is permitted to make”), App A at 1 (affording grandfathered licensees an exclusive GSA).

<sup>10</sup> In the interest of brevity, WCA, NIA and CTN will not attempt to address every single point made by every party. While some parties have raised legitimate issues that merit further consideration, others raised minor, ancillary concerns or make points that are difficult to understand. The fact that WCA, NIA and CTN have not addressed a particular point should not necessarily be interpreted as agreement with that point. When the Commission solicits comment in its upcoming notice of proposed rulemaking, WCA, NIA and CTN will submit their views on the issues raised by the Commission at that time.

to endorse the Proposal in its entirety, without material alterations, given that the Proposal contemplates a very carefully crafted and massively interrelated structure that works as proposed, but may not successfully work if certain components are missing or others are added.<sup>11</sup>

## **II. THE COMMENTS SUPPORT ADOPTION OF THE BANDPLAN PROPOSED BY WCA, NIA AND CTN.**

The central component for a new MDS/ITFS regulatory regime is a new bandplan that solves a variety of thorny technical and regulatory problems by physically separating high-power, high-site downstream operations from two-way cellularized operations.<sup>12</sup> Of the more than one hundred entities that have submitted separate or joint comments in response to the *Public Notice*, only a handful have expressed concerns regarding this key element of the white paper.

Clarendon Foundation (“Clarendon”)<sup>13</sup> objects to the proposed new bandplan because, rather than providing ITFS licensees with contiguous spectrum, the bandplan calls for each current licensee of an ITFS channel group to secure one channel in the mid-band segment (“MBS”) that will not be contiguous to its channels in the lower band segment (“LBS”) or the upper band segment (“UBS”).<sup>14</sup> According to Clarendon, “the vast majority of educational institutions do not have any desire to use one channel for video”<sup>15</sup> and thus would benefit from

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<sup>11</sup> Joint ITFS Comments, at 3. Along similar lines, IPWireless notes that “the White Paper describes a new regulatory regime which, *if adopted by the Commission substantially as proposed*, will facilitate deployment of innovative equipment and applications which will benefit consumers and the US economy by providing untethered access to information and services from fixed, portable and mobile devices.” IPWireless Comments, at 2 (emphasis added). By contrast, any substantial changes to the regime proposed in the white paper runs the risk of undermining the careful balance achieved by WCA, NIA and CTN.

<sup>12</sup> See White Paper, at 12-19.

<sup>13</sup> According to the Broadband Licensing System, Clarendon holds licenses for ITFS facilities in Fairbanks, AL, Sheridan, WY, Lewiston, ID, Columbus, OH, Lubbock, TX and Alamosa, CO.

<sup>14</sup> Comments of Clarendon Foundation, RM-10586 (filed Nov. 18, 2002)(“Clarendon Comments”).

<sup>15</sup> *Id.*, at 1.

having contiguous spectrum. The short answer is that Clarendon's fundamental premise – that ITFS licensees have no desire to continue high-power, high-site operations – is incorrect.

While Clarendon may not have an ongoing desire to transmit video programming, the discussions that WCA, NIA and CTN had with their educator-members prior to submitting the white paper, coupled with the overwhelming support for the white paper expressed by so many of the educators responding to the *Public Notice*,<sup>16</sup> demonstrates that Clarendon's views are not shared by the ITFS community as a whole. The bandplan was specifically designed to accommodate the need of many ITFS licensees to continue to transmit video programming from their current high-power, high-site station locations, while at the same time freeing spectrum for streamlined licensing and more flexible use.<sup>17</sup> The wisdom of that approach is confirmed in the Joint Comments submitted by over 45 leading ITFS licensees, who confirm that:

Many of the ITFS Parties have moved or contemplate moving away from traditional one-way video-based distance learning activities over ITFS, and they believe that their educational telecommunications endeavors will be substantially furthered by making available substantial spectrum that can actually be used effectively and efficiently for two-way broadband data communications. Others continue to need to provide one-way video service, but understand that these services will be protected in the new band plan and rules, while making possible new broadband data services and attractive excess capacity leasing opportunities.<sup>18</sup>

The proposed new bandplan has been designed to afford Clarendon and other ITFS licensees that would prefer to focus their efforts on data-centric applications with a wealth of

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<sup>16</sup> See *supra* note 4.

<sup>17</sup> To the extent that Clarendon's comments can be read as suggesting that the decision as to how many channels should be allocated to the MBS be made on a market-by-market basis, WCA, NIA and CTN direct the Commission's attention to the discussion in the white paper that explains in detail why a market-by-market approach to setting the size of the MBS is unworkable. See White Paper, at 17-18.

<sup>18</sup> Joint ITFS Comments, at 2. See also, e.g. University of Colorado Comments, at 1 ("The University supports the Proposal because it provides a framework to protect existing ITFS operations while, at the same time, opening up the spectrum for a host of new two-way, interactive broadband services.").

options. First, the white paper does not propose any restriction on the ability of MBS licensees to utilize their facilities for downstream data transmission rather than downstream video transmissions. As is expressly discussed in the white paper:

there is no reason why an MBS channel could not be used for downstream transmissions in an FDD system, so long as the licensee operates in compliance with the MBS licensing, operational and technical rules. While it is assumed that most use of the MBS will be for downstream video and data transmissions, the proposal does not contemplate any restriction on the transmission of downstream voice in the MBS or on the number of downstream transmitters (i.e. cells) that an MBS licensee can deploy in its service area.<sup>19</sup>

Thus, under the WCA-NIA-CTN proposal, Clarendon or any other MDS or ITFS licensee would be free to utilize their MBS channels for downstream data transmissions.

Second, as discussed in the white paper, it is anticipated that an active secondary market will develop in which MBS licenses will be traded for LBS/UBS licenses.<sup>20</sup> While Clarendon may not want any MBS channels, it is likely that there will be licensees in many markets who would prefer more than the single default MBS channel assigned them under the new bandplan and would be willing to engage in a channel swap.

Third, the white paper proposes that so long as the appropriate consents are obtained, MBS licensees should be permitted to utilize their spectrum for two-way cellularized operations subject to the LBS/UBS regulatory regime. Specifically, the white paper provides that:

the licensee of an MBS channel should be permitted to utilize that spectrum in accordance with the LBS and UBS rules so long as it receives written consent from: (i) every MBS licensee with a transition impact area . . . that overlaps or is within six miles of the licensee's own Geographic Service Area ("GSA") . . . ; and

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<sup>19</sup> White Paper, at 16-17.

<sup>20</sup> *See id.* at 13 ("it is anticipated that there will be an active secondary market in authorizations – those licensees that want additional spectrum in the LBS/UBS will be able to swap their spectrum in the MBS for additional LBS/UBS channels, while those that intend to focus on high-power, high-site operations will be able to swap their LBS/UBS channels for additional MBS spectrum.")

(ii) every cochannel MBS licensee with GSA center coordinates that are within 100 miles of the GSA center coordinates of the licensee proposing to operate under the LBS/UBS rules. This proposal allows MBS spectrum to be efficiently utilized while at the same time assuring that one of the basic purposes of the bandplan – protecting MBS operations from cochannel, adjacent channel and brute force overload interference – is not compromised.<sup>21</sup>

Thus, if one assumes for purposes of argument that Clarendon is correct and there will be no demand for spectrum subject to the MBS rules, licensees can be expected to act in their own self interest, provide the consents necessary for MBS spectrum to be operated under the LBS/UBS rules, and engage in the channel swaps necessary to provide each licensee with contiguous spectrum.

Indeed, it is telling to juxtapose Clarendon's view that there is no need for an MBS against that of Stanford University ("Stanford"), which expresses a concern that it will not receive sufficient spectrum in the MBS to accommodate possible future growth of video services and that "an ITFS licensee may end up with spectrum that is not particularly useful for its educational mission [presumably referring to LBS/UBS spectrum]."<sup>22</sup> The short answer to Stanford's concerns is that its future growth can be accommodated by using more efficient digital compression rates on its MBS channels, by acquiring additional MBS channels by swapping its "not particularly useful" channels in the LBS/UBS, or by deploying facilities in the

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<sup>21</sup> White Paper, at 17.

<sup>22</sup> Comments of the Board of Trustees of Leland Stanford Junior University, RM-10586, at 4 (filed Nov. 14, 2002)("Stanford Comments"). One of the concerns expressed by Stanford is that the new bandplan does not provide an MBS channel for the H group, and that it uses H channel station WNTA285 to provide educational programming. *See id.* at 6. WCA, NIA and CTN have been unable to find any evidence in the Commission's records in the Universal Licensing System or the Broadband Licensing System regarding WNTA285, making it difficult to address how the station should be dealt with in connection with a transition. However, if Stanford provides additional information regarding the licensing and use of that station, WCA, NIA and CTN are prepared to consider modifying their proposal so that Stanford would be assured that any ITFS-like programming transmitted on WNTA285 must be migrated to a channel to be licensed to Stanford post-transition in the MBS. However, because this appears to be the only situation in the country where an ITFS licensee also holds an H channel license that it uses like an ITFS station, it would not make sense to provide a default H channel in the MBS nationwide just to accommodate one licensee.

LBS/UBS that utilize emerging technology to deliver educational video materials.<sup>23</sup> The more important point, however, is that while Clarendon and Stanford are at opposite ends of the issue, the overwhelming majority of ITFS licensees believe that WCA, NIA and CTN got it right in proposing to establish an MBS with seven 6 MHz channels.<sup>24</sup>

While the new bandplan proposed in the white paper drew support from the overwhelming majority of MDS licensees,<sup>25</sup> one MDS licensee, Dallas MDS Partners (“Dallas MDS”) (which won the lottery for the E Group license for Dallas, TX), complains that it “is not clear” why under the proposed default bandplan MDS E or F Group licensees receive one channel in the MBS, rather than all four channels in the UBS.<sup>26</sup> In fact, there are several reasons why WCA, NIA and CTN have crafted the bandplan in that manner, and why the proposal by Dallas MDS to remove channels E4 and F4 from the MBS is fundamentally flawed.

First, as Dallas MDS is well-aware,<sup>27</sup> there are numerous “grandfathered” E and F Group ITFS licensees spread throughout the country – ITFS licensees licensed on E or F Group spectrum prior to the Commission’s decision in 1983 to reallocate those groups from ITFS to MDS. Indeed, the table listing current ITFS licensees recently released by the Wireless

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<sup>23</sup> While Stanford is concerned that migration to the MBS “could make it more difficult and costly for Stanford to utilize the ITFS spectrum for growth of its instructional programming in the future,” numerous other educators see tremendous advantages in transitioning to the new bandplan. *See supra* note 4. Also, the increased utility of the LBS/UBS should allow licensees to garner substantial funds from the leasing of excess capacity on its channels there – funding that is likely to offset any increase in the cost of operating its video system. *See* Stanford Comments, at 4.

<sup>24</sup> *See supra* note 4.

<sup>25</sup> *See supra* note 3.

<sup>26</sup> *See* Comments of Dallas MDS Partners, RM-10586, at 2-3 (filed Nov. 21, 2002)(“Dallas MDS Comments”).

<sup>27</sup> *See id.* at 3-6 (opposing proposals in white paper regarding treatment of grandfathered ITFS licensees, one of which is in Dallas operating on adjacent channels to Dallas MDS Partners and the other of which is in Ft. Worth operating cochannel to Dallas MDS Partners).

Telecommunications Bureau in connection with its efforts to verify the Broadband Licensing System demonstrates that there are in excess of fifty such grandfathered ITFS stations on the E and F Group channels, including stations in such major markets as Chicago, Dallas-Ft. Worth, Las Vegas, Los Angeles, Miami, San Francisco, New York, and Washington.<sup>28</sup> Significantly, Dallas MDS offers no proposal for addressing the migration of those grandfathered ITFS licensees to the MBS absent the establishment of default E and F channels in the MBS.

Second, the logical predicate to the argument advanced by Dallas MDS – that the MBS is only of interest to ITFS licensees – is not true. Contrary to Dallas MDS’s assertion, E and F Group MDS licensees have expressed an interest in securing spectrum in the MBS.<sup>29</sup> Indeed, the white paper is supported by such entities as BellSouth, Nucentrix Broadband Networks, Sprint and WorldCom, which collectively hold the vast majority of the licenses for E and F Group MDS stations in the country.<sup>30</sup> Moreover, the filings by several smaller wireless cable video system operators in response to the *Public Notice* certainly illustrate a desire on the part of those E and F Group licensees to continue to operate high-power, high-site facilities.<sup>31</sup> While Section III.D of these reply comments addresses in more detail why the proposed transitional system is not a threat to the continued provision of video services, for present purposes it is worth noting that removal of 12 MHz from the MBS would prove counterproductive for those small video systems which can continue to serve subscribers by migrating their current offerings to digitized facilities operating on the MBS channels.

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<sup>28</sup> See “Wireless Telecommunications Bureau Seeks To Verify ITFS, MDS, And MMDS Licensee Status And Pending Applications,” *Public Notice*, DA 01-2751 (rel. Oct. 18, 2002).

<sup>29</sup> See Dallas MDS Comments, at 3.

<sup>30</sup> See *supra* note 3.

<sup>31</sup> See *infra* notes 77 and 78.

Third, eliminating channels E4 and F4 from the MBS and relocating them to the UBS as proposed by Dallas MDS would result in a significant impediment to the development of FDD technologies in the band. As proposed by WCA, NIA and CTN, the LBS and UBS are symmetrical, each 66 MHz wide. Were the Dallas MDS approach adopted and channels E4 and F4 moved to locations adjacent to the other channels in those groups, the UBS would be 78 MHz wide and there would be an asymmetry that would unduly complicate the provision of FDD services in the band.

The final set of comments to oppose the proposed new bandplan came from Rioplex Wireless (“Rioplex”). Rioplex appears to be arguing that the proposed new bandplan and the migration of licensees to different spectrum within the 2500-2690 MHz band is unnecessary, analogizing the white paper to an “attempt to rearrange deck chairs on a ship that is at long last seaworthy.”<sup>32</sup> At the risk of carrying the analogy one step too far, the white paper demonstrates that if MDS and ITFS licensees are on any ship under the current rules, it is the Titanic.<sup>33</sup>

The need for a new bandplan is not just the view of WCA, NIA and CTN, but a view shared by the overwhelming majority of the comments submitted in response to the *Public Notice*.<sup>34</sup> The record clearly reflects that under the current bandplan, the 2500-2690 MHz band cannot readily be shared between legacy high-power, high-site operations such as those Rioplex embraces and the two-way cellularized services to which much of the industry is migrating.

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<sup>32</sup> See Comments of Rioplex Wireless, RM-10596, at 3 (filed Nov. 14, 2002). It is interesting to note that while Rioplex purports to be invoking the interests of ITFS licensees in the South Texas, the licensee of the A Group ITFS channels in Brownsville and McAllen, TX, Texas State Technical College, strongly supports adoption of the proposals advanced in the white paper. See TSTC Comments.

<sup>33</sup> See White Paper, at 2-11.

<sup>34</sup> See *supra* notes 3, 4 and 5.

Rioplex does not even address, much less refute, the lengthy discussion in the white paper as to why a revised bandplan is essential.<sup>35</sup> It is ironic that Rioplex enthusiastically endorses the proposal by WCA, NIA and CTN to eliminate site-by-site licensing in the LBS and UBS,<sup>36</sup> but fails to appreciate that the establishment of the MBS (and the resulting rebanding) and the migration of high-power, high-site ITFS downstream video to the MBS are essential preconditions before a geographic licensing scheme for the LBS and UBS can be deployed.<sup>37</sup>

**III. THE COMMISSION SHOULD RETAIN THE CAREFULLY CRAFTED PROPOSAL FOR TRANSITIONING TO THE NEW BANDPLAN**

***A. The Comments Support The Market-By-Market Approach Advocated In The White Paper.***

The white paper advocated an approach to transitioning to the new bandplan on a market-by-market basis, with each licensee bearing its own costs save for the Proponent's payment of the costs of providing new ITFS downconverters and migrating ITFS video programming and data transmissions to the MBS.<sup>38</sup> That general approach of transitioning to the new bandplan on a market-by-market basis was applauded by all of those commenting in response to the *Public Notice*, save for the MMDS Licensee Coalition ("MLC"). It asserts that the transition "would be infinitely simplified if all MDS and ITFS licensees were required to transition to the new plan by specified dates at their own expense."<sup>39</sup>

WCA, NIA and CTN concede that such an approach might seem simpler – because the transition theoretically would occur more rapidly and without the need for Proponent-driven

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<sup>35</sup> See White Paper, at 12-19.

<sup>36</sup> See Rioplex Comments, at 2.

<sup>37</sup> See White Paper, at 12-19.

<sup>38</sup> See *id.*, at App. B, at 5.

<sup>39</sup> MMDS Licensee Comments, at 3.

transition plans and the resulting potential for dispute and delay. However, there are strong countervailing considerations that ultimately led to the proposals included in the white paper. First, the reality is that many ITFS licensees simply do not have funding available to effectuate a transition (and many ITFS excess capacity leases do not necessarily require the lessee/commercial operator to pay those costs). The problem – one unaddressed by MLC – was solved in the white paper by delaying each ITFS licensee’s migration to the MBS until a Proponent was prepared to fund that transition.

Second, under the WCA-NIA-CTN proposal, many rural video operators will be able to continue operating under the current bandplan for the foreseeable future. This would occur because a market is not transitioned to the new bandplan until someone either is prepared to utilize the new bandplan in serving that market or transition is necessary to allow advanced wireless services in a neighboring market.

Third, because even the largest operators do not have unlimited resources and the capital markets are not currently favorable to the funding of new infrastructures, the market-by-market approach proposed in the white paper allows scarce funding to be directed where it is needed most – the markets where operators are ready to deploy services – without forcing premature expenditures in markets where service will not be immediately deployed.

At the same time, WCA, NIA and CTN recognized that the delays inherent in a market-by-market approach, *if kept to a minimum*, would not undermine the ultimate success of the MDS/ITFS bands as home to advanced wireless services. MLC supports a nationwide transition funded by each licensee because it fears that the market-by-market approach will result in “constant bickering over the terms of transition and who is responsible for what costs, a process

which is likely to delay rather than expedite transition to the hoped for new order.”<sup>40</sup> However, WCA, NIA and CTN believe, as discussed in Section III.B of these reply comments, that delays can be minimized if the Commission adopts their proposal for Proponent-led transitions. Indeed, the principles behind the transition proposal advanced by WCA, NIA and CTN are identical to those that govern the Commission’s microwave relocation policies – under the microwave relocation policies the newcomer makes the fundamental decisions regarding the relocation and, so long as certain Commission-mandated standards are met, the licensee being relocated cannot delay the process. The successful deployment of broadband PCS, which occurred on a market-by-market basis because of the need to clear spectrum of point-to-point microwave facilities using the microwave relocation policies, speaks volumes as to the wisdom of this approach.

Finally, the alternative suggested by MLC is unworkable. MLC would have the Commission order the transition to proceed “*a la* cellular with the top 30 markets transitioning in year one, the next 60 in year two, or so on until all of the markets were transformed.”<sup>41</sup> Not only would this approach force system operators to expend funds in markets based on a Commission-mandated artificial deployment schedule, but it likely would slow the deployment of advanced services to the public in major markets.

The flaw in MLC’s alternative proposal is that it fails to address the fact that two-way, low-power cellular services in major markets will suffer interference from high-power, high-site operations in much smaller neighboring markets.<sup>42</sup> Until neighboring small markets are

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<sup>40</sup> MMDS Licensee Comments, at 3.

<sup>41</sup> *Id.*

<sup>42</sup> The risk of interference from high-power, high-site operations to two-way cellular operations also explains why it is essential for the Commission to limit modifications by non-transitioned facilities in the manner proposed in Appendix B to the white paper. *See* White Paper, App. B, at 2. While Illinois Institute of Technology (“IIT”) would

converted to the new bandplan, service cannot be deployed in the major market. This point is amply illustrated in Section III.D of these reply comments, which establishes, for example that a system in Milwaukee, WI (a major market under the cellular ranking systems) cannot operate until the video system in Madison, WI (a small market under the cellular ranking system) has been transitioned. To address this reality, Appendix B to the white paper provides for the Proponent to transition not just the market it desires to serve, but the market of any licensee that has a GSA located in whole or part within 150 miles of any portion of its own GSA.<sup>43</sup> In the case of the cellular telephone service, this consideration simply was not present, as the spectrum was largely vacant of incumbent users and service could be deployed in the large market licensed first without fear of cochannel interference from smaller markets nearby. Again, the more appropriate analogy to the current situation is broadband PCS, where service providers were not given an arbitrary deployment schedule set by the Commission without regard to marketplace considerations, but rather were given both the flexibility to deploy services when and where they saw fit and the tools to make sure that nearby incumbents did not interfere.

***B. The Role of The Proponent Has Been Properly Structured To Avoid Delay And Undue Expense In Effectuating Transitions.***

As discussed above, the approach proposed by WCA, NIA and CTN for transitioning from the old bandplan to the new bandplan has been modeled in certain respects on that used in the highly-successful launch of broadband PCS services. However, the circumstances are not

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understandably prefer to have flexibility to modify non-transitioned facilities freely (*see* Comments of Illinois Institute of Technology, RM-10586, at 20 (filed Nov. 21, 2002)(“IIT Comments”), the Commission cannot permit modifications in non-transitioned markets to cause interference to operating two-way cellularized systems. The limits proposed by WCA, NIA and CTN are necessary to assure that does not occur, while at the same time affording non-transitioned licensees substantial flexibility to make non-threatening modifications.

<sup>43</sup> *See* White Paper, App. B, at 13-14.

entirely the same. In PCS new auction winners completely displaced existing licenses who were moved to entirely different bands. Here, existing licensees are merely rearranging their spectrum holdings within the same band. Thus, WCA, NIA and CTN recognized that modifications to the broadband PCS approach were necessary to effectuate a smooth, fair and quick transition from the current to the new regulatory regime.

The necessity for an expeditious and clearly structured transition process is obvious once consideration is given to the unique circumstances in this band. In each market, there may be ten or more individual licensees (at least one licensee for each of five ITFS and two MDS channel groups, and up to three licensees for the H group channels). In many cases, multiple markets will need to be transitioned at once as part of an integrated process, further multiplying the number of interested parties. If the transition process is not structured properly, any one of these licensees, whether acting with good intent or bad, could derail or substantially delay the transition to the new bandplan and, consequently, the advanced services that the new bandplan supports. Similarly, substantial delays could occur if each licensee is permitted to offer its own version of an “ideal” transition plan, subject to a decision on the merits by the Commission in order to resolve whose plan is best or most “reasonable.” The Commission does not have the resources to expeditiously resolve these sorts of controversies, which harken back to the sorts of comparative hearings that the Commission has long since abandoned. In addition, commercial entities committed to providing advanced services simply will not make the investment necessary to effectuate the transition if their efforts are subject to protracted disputes.

In order to avoid these sorts of problems, WCA, NIA and CTN agreed that it was necessary to create a framework in which a “Proponent” – the entity in each market that “steps

up to the plate” and agrees to fund the deployment of new ITFS downconverters and the migration of ITFS video programming and data streams to the MBS – can efficiently facilitate the transition process.<sup>44</sup> The specific role to be played by the Proponent in each transition was the subject of much discussion and debate by WCA, NIA and CTN. Their objectives in crafting the transition process were to assure that it be done quickly, smoothly and fairly, and they established the rights and responsibilities of the Proponent in a manner they believe accomplishes these broad goals. Simply put, in order to avoid undue delay they have given the Proponent clearly defined rights in effectuating the transition, while at the same time constraining those rights where necessary to assure that all licensees are treated fairly (although not necessarily in the manner that each licensee would choose if it had a blank check). While the vast majority of those commenting on the white paper expressed no objections to the Proponent concept as envisioned by WCA, NIA and CTN, a small number of parties voiced concerns.

In some cases, these concerns appear to be grounded in fundamental misunderstandings of the role of the Proponent and are easily put to rest.<sup>45</sup> For example, IIT contends – wrongly we

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<sup>44</sup> MLC objects to the concept that any licensee in a market should be permitted to initiate a transition and instead proposes that “[a] Proponent of a transition should be required to have at least half of the spectrum in a market either licensed, under lease, or consenting to its plan before a transition is triggered.” *See* MMDS Licensee Comments, at 6. It is difficult to square this proposal with MLC’s call for a nationwide transition with each licensee paying its own costs. *See id.* at 2-3. Since MLC believes that all licensees should be required to transition, it is not easy to see the harm in allowing any licensee to commence the process. More importantly, MLC ignores that with the transition to the new bandplan, system operators will be able to provide valuable new services to the public without acquiring half of the spectrum in a market. To the contrary, with the 16.5 MHz afforded in the LBS/UBS for each current four-channel licensee, Time Division Duplex services can be provided. Thus, licensees or operators with just a few channels are likely to serve as Proponents in their own markets. And the restriction MLC proposes does not accommodate the fact that Proponents will often have to transition markets in which they have no channel rights in order to create an interference-free environment for the provision of two-way broadband services in nearby markets.

<sup>45</sup> Stanford has expressed concern that the proposal by WCA, NIA and CTN to have the Proponent pay the costs associated with deploying new downconverters and migrating programming tracks and data services to the MBS “may not be adequate for independent ITFS systems.” *See* Stanford Comments, at 8. However, Stanford provides no explanation as to why “independent” licensees are adversely impacted, and WCA, NIA and CTN do not

believe – that “[t]he White Paper suggests that the ‘Default’ frequency plan can be modified at will by the Proponent, even without the licensee’s consent.”<sup>46</sup> IIT cites to no specific provision in the white paper which supports its view. Indeed, in response to concerns orally expressed to counsel for NIA, the First Supplement to the white paper filed a week before IIT’s comments specifically provides that:

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.<sup>47</sup>

However, other arguments, if adopted by the Commission, would fundamentally compromise the role of the Proponent and create an environment in which multiple MDS and ITFS licensees across a region could suffer inordinate delays in deploying new services at the hands of a single licensee seeking, in the best case, their own narrowly-defined self-interest, and in the worst, greenmail or anti-competitive advantage. This is precisely what plagues the

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understand the specific problem Stanford envisions (other than Stanford’s preference for MBS channels as opposed to LBS/UBS channels).

<sup>46</sup> IIT Comments, at 4-5. IIT also contends that “it is imperative that no transition plan reduce the number of digital streams by switching those streams to analog, unless the ratio of a licensee’s educational programming streams to its MBS channels is 1:1 or less.” *Id.* at 5-6. As a practical matter, WCA, NIA and CTN cannot envision a scenario in which a Proponent would ever want to take the action IIT fears, but have no objection if the Commission desires to make the clarification IIT requests.

<sup>47</sup> First Supplement, at 4 n.12.

industry today, and what WCA, NIA and CTN have attempted to avoid in structuring the transition regime reflected in Appendix B to the white paper.<sup>48</sup>

A serious threat to the delicate balance between speedy deployment of advanced wireless services and fair treatment of incumbent licensees is found in the comments of the SDA. A critical component of the transition approach proposed by WCA, NIA and CTN is that the Proponent develops the Transition Plan and, so long as the Transition Plan is reasonable, an individual licensee cannot delay implementation simply because it would prefer that the transition occur in a different manner.<sup>49</sup> In crafting Appendix B, WCA, NIA and CTN recognized: (i) that there could be many reasonable ways to effectuate a transition in any given market; and (ii) that if the transition process required a comparison of transition plans from the Proponent and the various licensees in the market, any licensee intent on obstructing the transition could readily develop a plan that would meet the reasonableness standard and force a lengthy comparative process. That is why SDA's proposal is objectionable: under it, even where the Proponent advances a reasonable Transition Plan, every licensee involved in the process would be free to counter-propose a different variation and, so long as a counter-proposal is also reasonable, an adjudication would be necessary to "compare the reasonableness" of the competing proposals.<sup>50</sup>

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<sup>48</sup> See White Paper, App. B, at 1, 19, 21, 27.

<sup>49</sup> There is ample precedent for the approach WCA, NIA and CTN are suggesting. For example, it is well-established that under the Commission's microwave relocation rules, so long as the newcomer funding the relocation meets the "comparable facilities" standard called for by those rules, the licensee being relocated cannot dictate the specifics of the relocation plan.

<sup>50</sup> SDA Comments, at 6-7.

In a nutshell, adoption of SDA's proposal for comparative hearings would result in delayed deployment of advanced wireless services, be conducive to anticompetitive conduct and greenmail, and create a nightmare for the Commission staff responsible for handling what could be hundreds of adjudications. IIT is absolutely correct in worrying that:

[d]elay tactics might be used by the one commercial operator in a market in order to thwart a competitor's attempt to convert the band. . . . One operator may create this delay by encouraging its licensee/lessor in the market not to cooperate with the attempt by the competitor to serve as the Proponent and convert the market.<sup>51</sup>

That is why in the white paper WCA, NIA and CTN provided:

What the Transition Planning Period cannot become is an opportunity for licensees to frustrate a transition or seek greenmail. The Transition Planning Period is intended to be a forum for agreeing on transition logistics and deviations from default provisions, *it is not a negotiation as to whether the transition will occur and it is not a vehicle for licensees to extract premiums in exchange for cooperation.*<sup>52</sup>

What IIT fails to appreciate is that the appropriate antidote is found in the white paper – an approach that provides strong incentives against any licensee attempting to delay implementation of a reasonable Proponent-proposed Transition Plan. It defies logic to suggest that the objective of reducing delay would be served by allowing any licensee in a market to force a comparative hearing when the Proponent has advanced a reasonable Transition Plan.<sup>53</sup> Were the Commission to jettison the WCA-NIA-CTN proposal and replace it with such a system, two things would be certain: (1) the Commission will be forced to devote increasingly scarce staff resources to the almost impossible job of determining which of multiple competing plans is most reasonable; and (2) the emergence of MDS/ITFS spectrum as a home to advanced

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<sup>51</sup> IIT Comments, at 6.

<sup>52</sup> White Paper, App. B at 19 (emphasis in original).

<sup>53</sup> See IIT Comments. at 9; SDA Comments, at 6-7.

wireless services may never occur, as system operators, vendors and investors are unlikely to devote resources to a band where greenmail and anticompetitive conduct are allowed to flourish.<sup>54</sup>

If the Commission adopts the approach WCA, NIA and CTN suggest for defining the Proponent's role, and embraces the safe harbors suggested in Appendix B to provide Proponents and licensees with guidance as to what will be considered reasonable,<sup>55</sup> the number of disputes regarding Transition Plans should be minimal. However, some disputes are inevitable, and the approach proposed in the white paper for addressing any disputes that do occur was carefully crafted after extensive discussion to serve the fundamental objectives of speed and fairness. As explained in the white paper, WCA, NIA and CTN have proposed a system that "will assure that licensees do not create a dispute merely to frustrate a transition and/or force the payment of greenmail, and is essential to the achievement of expediting transitions to the new bandplan."<sup>56</sup>

Most significantly, by allowing the Proponent to implement any licensee counter-proposal

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<sup>54</sup> IIT is wrong when it suggests that under the WCA-NIA-CTN approach, the Commission would be limited to "rubber stamp[ing]" the Proponent's Transition Plan, since all the Proponent would have to do is provide a "reason" for the elements of its plan. *See* IIT Comments, at 9. That is an overly-literal reading of the term "reasonable" as used in the white paper. Indeed, the word "reasonable" is used 476 separate times in the Commission rules and in no instance is it given the meaning ascribed by IIT. A Transition Plan should be deemed reasonable if it is fair to those involved under the circumstances, not if the Proponent can find a reason to justify its provisions. Thus, although there might be good reason why a Proponent would want to require an ITFS licensee to lease to it, WCA, NIA and CTN never contemplated that a Transition Plan which *requires* an ITFS licensee to lease to the Proponent would be considered reasonable. *See* IIT Comments, at 9-10. However, contrary to IIT's suggestion, there is no rationale for precluding Transition Plans from addressing channels other than those in the MBS. *See id.* at 8. Indeed, as discussed in the white paper, a Transition Plan may well address channel swaps involving LBS/UBS channels or other issues agreed to by the relevant licensees. *See* White Paper, App. B at 19. However, WCA, NIA and CTN do agree that absent agreement of the affected licensees, a Transition Plan generally will not be reasonable if it goes beyond the subjects of deploying downconverters at ITFS receive sites and migrating ITFS video programming and data services to the MBS.

<sup>55</sup> SDA has proposed its own set of safe harbors, which generally attempt to implement its unique concepts as to how transitions should be implemented or to make clear matters WCA, NIA and CTN believe are self-evident. *See* SDA Comments, at App. C. Because WCA, NIA and CTN are addressing SDA's concepts in these reply comments, they do not address SDA's safe harbors separately here.

<sup>56</sup> *See* White Paper, App. B, at 21.

pending resolution of the dispute and then secure compensation equivalent to the additional costs it unnecessarily incurred should the initial Transition Plan be found reasonable, WCA, NIA and CTN have developed an approach that avoids delay and carefully fits any penalty to the extent of the harm.<sup>57</sup>

SDA is correct in noting that in any given dispute the financial risk on the Proponent (paying the dispute-related costs of the licensee objecting to the initial Transition Plan if it is found to be unreasonable) and the financial risk on the licensee submitting the counter-proposal will not be identical.<sup>58</sup> However, WCA, NIA and CTN believe that because the cost of a transition will not be large in most cases, and because the legal fees and other costs involved in resolving a dispute are likely to be substantial, it will often be the Proponent who is at greater financial risk than the licensee objecting to the Proponent's Transition Plan. Indeed, there is no basis to suggest that licensees who object to Transition Plans "run the risk of unlimited liability."<sup>59</sup> To the contrary, the white paper is clear that a Proponent's recovery is limited to "those additional documented costs incurred by the Proponent which were (i) over and above what the Proponent proposed in its Transition Plan, and (ii) directly related to implementing the counterproposal."<sup>60</sup> Thus, the financial risk to any objecting licensee is limited and the scope of that risk is directly under the control of the objecting licensee.

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<sup>57</sup> Although IIT proposes that the Commission eliminate any financial penalty on a licensee that unnecessarily submits a counter-proposal to a reasonable Transition Plan, IIT fails to propose any regulatory approach that would provide a disincentive against the filing of frivolous or over-reaching counter-proposals or those designed to extract greenmail or delay transitions for anticompetitive purposes. *See* IIT Comments, at 8.

<sup>58</sup> *See* SDA Comments, at 7.

<sup>59</sup> *Id.* at 8.

<sup>60</sup> White Paper, App. B, at 21.

The important point is that the Proponent faces a substantial financial penalty if it submits an unreasonable Transition Plan, and a licensee faces a significant financial penalty if it objects to a reasonable Transition Plan. Regardless of whether those penalties will be equal in any given situation, each side has an appropriate incentive to act in a manner that will result in quick and fair transitions without opening the door to greenmail or anticompetitive conduct.<sup>61</sup>

A few parties have raised concerns about possible financial defaults by Proponents.<sup>62</sup> Again, this was a topic of substantial discussion and debate among WCA, NIA and CTN, with the objective of providing licensees with a reasonable assurance that the Proponent has the financial wherewithal to complete transitions without imposing unnecessary regulatory obstacles. The compromise reached is reflected in the white paper's proposed requirement that "[t]he Transition Plan should also provide for the establishment of an escrow or other appropriate mechanism for ensuring completion of the transition in accordance with the Transition Plan."<sup>63</sup> Although the costs of an MDS/ITFS transition are likely to be far less than the cost of migrating licensees in other services to entirely new spectrum, in this regard the WCA-NIA-CTN proposal goes beyond the protection afforded to licensees in other bands being migrated to new spectrum.

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<sup>61</sup> As such, there is no need to adopt SDA's proposal that a Proponent lose its right to propose and execute any transition if it is found to have litigated an unreasonable plan. *See* SDA Comments, at 8. There is ample incentive for Proponents to advance reasonable Transition Plans without such a "death penalty." Such an approach would only delay the deployment of advanced wireless services in the MDS/ITFS band, since it is generally going to be Proponents who are deploying such services.

<sup>62</sup> *See, e.g.* MMDS Licensee Comments, at 4. One comment called for the Commission to establish a "trust fund" modeled on the Commercial Spectrum Enhancement Act for funding transitions. *See* Comments of Network for Instructional TV, *et al.*, RM-10586, at 4 n.6 (filed Nov. 14, 2002) ("NITV Comments"). The Commercial Spectrum Enhancement Act calls for payment of the relocation of governmental spectrum uses out of a Spectrum Relocation Fund that is funded through the proceeds of auctions for the spectrum being vacated. In the instant case, however, there will not be any such auction and thus there is no funding mechanism for such a fund. Moreover, as discussed in the white paper, there does not appear to be any need for the establishment of an expensive clearinghouse through which funds will flow. *See* White Paper, App. B at 28-29 (citing situations in which the Commission declined to establish clearinghouses for the administration of relocation reimbursement plans).

<sup>63</sup> White Paper, App. B at 20.

***C. The Proposed Reimbursement Rules Are Based On Commission Precedent That Has Successfully Addressed The Problem Of “Free Riders”***

One of the most important aspects of the transition plan is the proposal for the Commission to adopt rules, modeled on current Sections 24.239 through 24.253 of its Rules, to address the problem of “free riders” during the transition process.<sup>64</sup> The concept, simply stated, is that if a Proponent pays for the costs associated with deploying new ITFS downconverters and migrating ITFS video programming and data services to the MBS, that Proponent should receive a fair reimbursement when some other licensee in the market uses transitioned spectrum to provide a commercial service.

Without any citation to the white paper, Dallas MDS expresses a concern that “licensees may be required to pay the transition costs of an ITFS licensee, even when that licensee has a commercial lessee that stands to be a primary beneficiary of such a transition.”<sup>65</sup> WCA, NIA and CTN are at a loss to understand the basis for Dallas MDS’s concern – they have clearly proposed that the Proponent is responsible for the costs of migrating ITFS licensees to the MBS and have not required those costs to be shared by other licensees in the market.<sup>66</sup>

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<sup>64</sup> See White Paper, App. B, at 28-29. See also, e.g., *See Amendment to the Commission’s Rules Regarding A Plan for Sharing the Costs of Microwave Relocation*, 11 FCC Rcd. 8825, 8831 (1996) (discussing “free rider” problem where beneficiaries of relocation do not pay relocation costs).

<sup>65</sup> Dallas MDS Comments, at 7.

<sup>66</sup> Thus, Dallas MDS’s proposal that “if within a window of two years after an ITFS licensee spurs a transition a commercial party leases an ITFS license, that party should be required to refund to other parties their pro rata share of reimbursement costs” is difficult to fathom, as there is no obligation on anyone but the Proponent to pay the costs of relocating ITFS licensees to the MBS. *Id.* Similarly, the complaints advanced by Dallas MDS that the rules are skewed in favor of those who hold the most spectrum in a market are devoid of logic. See *id.* at 7-8. For example, while Dallas MDS complains that under the proposed bandplan all of its spectrum will be in the UBS (precluding it from providing FDD services), Dallas MDS cannot provide FDD service under the current bandplan without securing additional spectrum. Admittedly, an entity that holds more spectrum is going to have more options available to it. However, that is not because the rules are skewed but because those with more spectrum inherently can do more things. Indeed, it is no different under the current bandplan – to provide FDD services, as a practical matter, one needs more than a single 4-channel group. If Dallas MDS wants to have the same options available to those who hold more than 4 channels, the answer is for Dallas MDS to buy or lease additional spectrum.

Dallas MDS's complaint may relate to confusion over the efforts by WCA, NIA and CTN to eliminate "free riders" in the transition process.<sup>67</sup> As Dallas MDS recognized, in Appendix B to the white paper WCA, NIA and CTN suggested that:

To avoid "free riders" on the band-clearing efforts of others in connection with the establishment of PCS, the Commission adopted Sections 24.239 through 24.253 of its Rules, which mandate reimbursement of the party that pays to relocate a fixed microwave service link when others subsequently benefit. Those rules should serve as a model for rules to address the problem of "free riders" during the transition process.<sup>68</sup>

In response, Dallas MDS now "asks the Commission to specify what 'benefit' is required to trigger the proposed compensation mechanism."<sup>69</sup> The answer can be found in the language of the white paper immediately following that quoted above:

Specifically, whenever spectrum in the LBS or UBS is used to render commercial service (either directly or indirectly through a channel lessee), the party offering the commercial service should be required to reimburse its *pro rata* share of the cost of transitioning the facilities it uses and the cost of transitioning facilities associated with any overlapping TIA.<sup>70</sup>

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Along almost identical lines, MLC notes that there are only ITFS channels in the LBS and suggests that "there may be some merit to putting some part of the reallocated ITFS spectrum in the UBS and, similarly, putting some portion of the reallocated MDS channels in the LBS because "[t]his adaptation would ensure that FDD Proponents will not be stymied simply because all of the ITFS or all of the MDS channels are committed to other purposes." MMDS Licensee Comments, at 8-9. However, if all of the other ITFS and MDS channels are committed to other purposes, a licensee seeking to deploy FDD services will be unable to do so, regardless of whether MDS channels are moved to the UBS. Moreover, changing the bandplan to move MDS channels into the LBS would destroy a significant objective WCA, NIA and CTN shared – maintaining existing adjacency relationships for interference avoidance purposes.

<sup>67</sup> See *id.* at 6.

<sup>68</sup> See White Paper, App. B, at 28. While SDA contends the a Proponent that has launched two-way service "will have every incentive to obstruct and overcharge a newcomer," it provides no evidence any such problems have arisen between competing broadband PCS licensees under the microwave relocation rules. See SDA Comments, at 8.

<sup>69</sup> Dallas MDS Comments, at 6-7.

<sup>70</sup> White Paper, App. B, at 28.

While this approach has been employed without difficulty in a variety of microwave relocation settings,<sup>71</sup> MLC calls for the Commission “to absolve involuntary participants in a transition plan of any obligation to share in the costs of that plan.”<sup>72</sup> But to do so would recreate the problem of “free riders” that the Commission has sought to avoid.

***D. Expanding The MVPD “Opt-Out” As Requested By Small Rural Providers Is Unnecessary And Will Preclude The Deployment Of Advanced Wireless Services In Major Markets.***

As is discussed in detail in the white paper, one of the fundamental objectives shared by WCA, NIA and CTN is to isolate high-power, high-site downstream transmissions from channels used by two-way cellular systems in order to avoid, among other things, the cochannel interference that those downstream transmissions cause at base stations located in neighboring markets.<sup>73</sup> Throughout this process, WCA, NIA and CTN have recognized that the transition to the new bandplan could impose certain inconveniences on wireless cable multichannel video

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<sup>71</sup> Because of the Commission’s long history of success in applying the microwave relocation rules, there is no basis for IIT’s suggestion that unless licensees are able to effectuate their own individual relocations, Proponents will be able to inflate their costs and secure undue reimbursement. *See* IIT Comments, at 13. Nor is there a basis for the other arguments advanced by IIT against a reimbursement program modeled on existing Commission microwave relocation policy. *See id.* at 16-17. For years, auction winners have been relocating incumbents and recovering reimbursement from other auction winners without any evidence of the evils IIT fears will happen here. IIT presents no rationale as to why problems are likely to arise in MDS/ITFS that have not occurred in other services.

Moreover, to the extent that IIT believes that a reimbursement program is not necessary because “[i]n most cases, the Proponent will lease or hold the licenses for almost all of the channels in the market,” its factual predicate is suspect. To the contrary, as discussed *supra* at note 44, Proponents are as likely to be entities with relatively few channels. As IIT itself recognizes, “[t]here are many markets where MDS/ITFS channels are used by more than one commercial operator, and there will be many markets where there will be more than one commercial operator interested in offering service.” IIT comments, at 6. Thus, there is a real need to minimize the potential for “free riders.”

<sup>72</sup> *See* MMDS Licensee Comments, at 5. Similarly, Dallas MDS Partners expresses the concern that it should not have to pay the cost of transitioning an ITFS licensee where the lessee of excess capacity from that licensee will benefit. *See* Dallas MDS Comments, at 7. What this argument misses, however, is that if the lessee actually uses the transitioned ITFS channels for commercial purposes, then it will be obligated under the proposed rules to repay both the original Proponent and Dallas MDS Partners (assuming that Dallas MDS Partners had paid partial reimbursement to the original Proponent).

<sup>73</sup> *See, e.g.* White Paper, at 10, 13-14.

programming distributors (“MVPDs”) and, to mitigate those inconveniences, have proposed that the Commission allow MVPDs that serve just 5% or more of the homes within their Geographic Service Area (“GSA”) or have deployed digital technology on more than seven channels to “opt-out” of the transition process.<sup>74</sup> Those proposed MVPD opt-out provisions were supported, not only by video operators who would qualify to opt-out should they choose,<sup>75</sup> but also by a variety of parties that currently operate video systems and will be unable to opt-out under the proposal advanced by WCA, NIA and CTN.<sup>76</sup>

While the WCA-NIA-CTN proposal drew support from operators of more than 100 active video systems, a handful of small system operators – operators who presumably have not achieved even the 5% penetration benchmark for “opt-out” status and have chosen not to offer digital technology – have urged the Commission to extend “opt-out” rights even further.<sup>77</sup>

In large part, the positions being espoused by this handful of MVPDs result from a misunderstanding of the impact the WCA-NIA-CTN proposal will have on small service

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<sup>74</sup> See *id.*, App. B at 16-18; First Supplement, at 4-5.

<sup>75</sup> See *e.g.* WATCH TV Comments, at 1-2; Digital TV One Comments, at 2-3.

<sup>76</sup> See, *e.g.* CNI Comments, at 2-3; Sprint Comments, at 3 n.4 (“with video systems operating today in 55 markets, Sprint is the largest multichannel video programming distributor using MDS/ITFS channels in the country. Nevertheless, Sprint embraces the proposed changes.”); Nucentrix Comments, at 2; BellSouth Comments.

<sup>77</sup> In virtually identical comments, three of those small MVPDs cite to the Commission’s 2001 annual report to Congress on the status of video competition for the proposition that there are 700,000 wireless cable video subscribers across the country. See Comments of Adams Telecom, RM-10586, at 3 n.3 (filed Nov. 14, 2002)(“Adams Comments”); Comments of Central Texas Communications, RM-10586, at 4 n.3 (filed Nov. 14, 2002)(“Central Texas Comments”); Comments of Leaco Rural Telephone Coop., RM-10586, at 3 n.3 (filed Nov. 14, 2002)(“Leaco Comments”). While WCA believes that figure (which was provided by the wireline cable industry to demonstrate that cable is subject to competition) is grossly inflated, the overwhelming majority of whatever number of subscribers existed when the Commission prepared its *supra* report were served by Sprint, WorldCom, BellSouth and Nucentrix – all of whom endorse the white paper. See *supra* note 3. Indeed, a review of the Section 21.911 reports filed with respect to the systems operated by those seeking changes in the MVPD “opt-out” suggest that only approximately 30,000 subscribers are served by those systems. While WCA cannot say with certainty how many subscribers are served by small video systems that object to the transition plan they propose, it is clear that the number is quite small indeed.

providers. It will not, as some argue, “sound the death knell for most rural wireless cable operators.”<sup>78</sup> To the contrary, the Commission should note the following:

- Adoption of the WCA-NIA-CTN proposal will have no adverse impact whatsoever on an MVPD until that MVPD’s market is transitioned. WCA, NIA, and CTN suspect that many of those complaining about the proposal are located sufficiently distant from other licensees that there is little chance they will be transitioned to the new bandplan unless and until they choose to do so themselves.
- Even those rural operators that are sufficiently close to other markets that they could be transitioned may not, in fact, be transitioned until they choose to do so themselves. Although WCA, NIA and CTN have attempted to limit the costs of transitions, they will not be inexpensive and will not be undertaken lightly. As a practical matter, a Proponent is likely not to transition a market that could be transitioned if the Proponent is able to design its network at reasonable cost to avoid interference.
- Even after being transitioned to the new bandplan, many MVPDs and their affiliated licensees will be able to continue operating their current analog systems without making any technical modifications. WCA, NIA and CTN have not proposed to bar the transmission of downstream video programming on any channel, so the only question is whether the system complies with the new rules applicable to the LBS, UBS and Transition Bands. That will depend on the location of the transmission tower relative to the borders of the GSA and the transmission system parameters (antenna height and orientation, beam tilt, EIRP, etc.). However, WCA, NIA and CTN suspect that where an MVPD controls the licensed channels in an isolated rural market, it may be able to continue its existing video operations without modification.
- Even in those cases where there has been a transition and the MVPD’s facilities do not comport with the new technical rules, the MVPD and its affiliates may be able to secure consents from neighboring licensees to such facilities. In every case where WCA, NIA and CTN have proposed a rule designed to protect a licensee against interference, they have also proposed that the intended beneficiary of the rule should have the right to waive those protections.
- Even in those cases where there has been a transition and the MVPD’s facilities do not comport with the new technical rules and consents from neighbors are not available, the MVPD and its affiliated licensees will often be able to make relatively minor modifications to their transmission system in order to comply with the new rules. Again,

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<sup>78</sup> Adams Comments, at 6; Central Texas Communications Comments, at 6; Leaco Comments, at 6. *See also* Comments of Alliance of Independent Wireless Video Operators, RM-10586, at 4 (filed Nov. 14, 2002)(wrongly claiming that adoption of the white paper’s proposal will require some video systems “to cease their current service offerings”)(“Alliance Comments”).

the specific modifications required to comply will have to be determined on a case-by-case basis and will depend on the location of the transmission tower relative to the borders of the GSA and the transmission system parameters (antenna height and orientation, beam tilt, EIRP, etc.). However, it is worth noting that because the primary concern here is the propensity of high-power, high-site downstream transmissions to interfere with base stations in neighboring service areas, the solution will often be as simple as adding beam tilt and/or lowering the height of the transmission antenna so that the MVPD's signals will not reach outside the MVPD's GSA. Note, too, that the white paper has specifically proposed that an MVPD who does not qualify to "opt-out" be given additional time in any transition in order to implement changes to its transmission system.<sup>79</sup>

- Any MVPD that does not qualify to "opt-out," is transitioned, and cannot take advantage of the opportunities presented in the preceding bullet points can digitize its system and provide even more video programming to subscribers utilizing just the channels available in the MBS. While a conversion to digital compression technology is not without cost, the Commission has on other occasions (most famously, the digital television transition) recognized that requiring licensees to adopt digital technology can be an effective mechanism for freeing spectrum for advanced services without any decrease in incumbent service.

Because of these ample avenues by which rural wireless cable systems can continue to provide video programming to their subscribers, the Commission need not consider whether, at this juncture, those systems are providing a valuable public service.<sup>80</sup> However, it is worth noting that virtually all residents of rural areas have access to Direct Broadcast Satellite service from two competing providers (EchoStar and DirecTV), C-band satellite services and, in many cases, a wireline cable system.<sup>81</sup> While it has been implied that absent wireless cable many rural

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<sup>79</sup> See White Paper, App. B at 26.

<sup>80</sup> Nor is there any reason to give serious consideration to the argument by the Alliance that seems to be saying the Commission cannot during the current term of MDS licenses impose new technical rules on licensees or modify the specific frequencies to which they have been assigned in the 2500-2690 MHz band. See Alliance Comments, at 4-6. Significantly, this is not a case where the Commission is revoking a license or requiring a licensee to relocate outside the band currently allocated to that licensee's service. Rather, it is akin to the Commission's repacking of the television band in order to free the upper and lower 700 MHz bands for advanced wireless services, which was accomplished by requiring television licensees to fund their own transition to digital technology and to new channel assignments.

<sup>81</sup> See, e.g., *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, 17 FCC Rcd 1244, 1273 (2002) ("According to DirecTV, its subscribers are distributed across the continental

residents would not have access to local over-the-air broadcasting,<sup>82</sup> the low penetration rates (below 5%)<sup>83</sup> of those making the argument suggest rather strongly that whatever unique local services they provide are not deemed essential by local residents. The experiences of large numbers of wireless cable system operators in urban and rural areas alike confirm that it is difficult, if not impossible, to operate a viable MVPD system without having converted to digital technology. Indeed, a review of the Commission's records demonstrates without doubt that the systems operated by those complaining about the WCA-NIA-CTN transition plan are in most cases small and getting smaller every year.<sup>84</sup>

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United States with approximately 50 percent residing in urban counties and 50 percent residing in smaller rural counties. As compared to cable subscribers, DirecTV subscribers are more likely to live in rural areas . . . .”) (footnotes omitted); *id.* at Table C-1 (stating that as of June 2001, DBS served 18.2% of all multichannel video households, versus .79% for MMDS); Application of EchoStar Communications Corporation, General Motors Corporation, and Hughes Electronics Corporation, CS Docket No. 01-348, 131 (rel. Oct. 18, 2002). As Clarendon notes “[t]here is no true public policy need for promoting wireless cable subscription television service in rural areas. All of these areas can be reached by satellite – without the line-of-sight problems and with much more content.” Clarendon Comments, at 3.

<sup>82</sup> See Adams Comments, at 1-2; Central Texas Communications Comments, at 1-2; Leaco Comments, at 1-2.

<sup>83</sup> The contention by some that “[i]t will not be easy for rural providers to meet the proposed five percent “opt-out” because most of their customers are scattered throughout large, rural service areas” is a *non sequitur*. See Adams Comments, at 5; Central Texas Comments, at 5-6; Leaco Comments, at 5. WCA, NIA and CTN specifically avoided setting an absolute numeric requirement (*e.g.* requiring 5000 subscribers in order for an MVPD to opt-out) in specific recognition that such a requirement could adversely impact rural service providers. Because they have proposed a percentage-based system (and chosen a very low penetration rate (one-third that required under the Commission's standard for determining whether a cable system is subject to effective competition), to boot), rural providers are on an equal footing with their urban counterparts. If anything, rural carriers have an advantage – because the potential MVPD subscriber base tends to be more spread-out in rural areas, wireless carriers have a cost advantage over the wireline competition that should have resulted in higher penetration percentages. Yet, as discussed in footnote 84, whatever apparent advantage they rural wireless cable systems may have, it is not translating into a growing subscriber base.

<sup>84</sup> For example, according to the Section 21.911 reports filed annually by MDS licensees, the system operated by Central Texas Communications in San Saba, TX had just 112 subscribers at year-end 2001, down 41 percent from its 189 subscriber at year-end 1998. The system in Wauneta, NE operated by Pinpoint Communications (“Pinpoint”) has shrunk to just 248 subscribers at year-end 2000 (2001 figures were not available at the Reference Room), down 44 percent from 441 subscribers at year-end 1997. Pinpoint's other systems have apparently not fared better – its Oshkosh, NE system has dropped 32 percent from 298 subscribers year-end 1997 to 202 subscribers at year-end 2000, its system in North Platte, NE has just 368 subscribers as of year-end 2000, down from 587 at year-end 1997, and its Wray, CO system has dropped 43 percent from 343 subscribers year-end 1997 to 195 subscribers year-end 2002. The wireless cable systems of Northwest Communications Cooperative in North Dakota are

All of this brings the discussion back to the reason for the new bandplan in the first place – the need to avoid interference from high-power, high-site systems to the base stations of two-way, low-power cellular systems. Were the continued operation of these systems benign, there would be no need for even one of these systems to make any changes to their designs or operations. But the fact is that they are not benign. It should not be lost on the Commission that, for all of their complaining about the transition plan, *not one of the small MVPDs has even questioned the fundamental premise here – that high-power, high-site systems are prone to cause interference to the base stations of two-way, low-power cellular systems in neighboring areas.*

The nature of the problem can be illustrated by examining some “real world” examples. For example, Socorro Satellite Systems, Inc. (“SSS”) the most recent addition to the Alliance, provides a wireless cable MVPD service to Socorro, NM, a community to the south of Albuquerque, NM. According to Section 21.911 reports filed with the Commission by SSS, it served just 796 subscribers at year-end 2001, down 8.5% from the 870 subscribers it was serving two years earlier. Yet, according to a report prepared by the engineering firm of Kessler & Gehman, a copy of which is annexed as Attachment 1, continued operation of this small wireless cable system will have a devastating impact on the ability of Sprint to provide two-way cellular services in and around Albuquerque, NM utilizing spectrum owned by Sprint.

For purposes of conducting this analysis, Kessler & Gehman made the reasonable assumption that a two-way cellular network of base stations utilizing the 2500-2690 MHz band would be designed in a manner similar to a broadband PCS network. Thus, for purposes of

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similarly shrinking towards oblivion. Its system in Epping has suffered a 34 percent reduction in subscribers, dropping from 476 as of year-end 1998 to 313 as of year-end 2001, while its system in Bowbells lost six percent of its subscribers in 2001 alone, dropping from 542 to 507 subscribers.

analysis, Kessler & Gehman assumed a deployment of base stations operating in the LBS and UBS that mirror the location and height of the base stations that have been actually installed by the local affiliate of Sprint PCS in the Albuquerque MDS/ITFS protected service area. As reported Kessler & Gehman reported in Attachment 1, continued operation of the SSS wireless cable system using channels in the LBS and UBS is predicted to result in harmful interference to 68 of the 73 base stations -- 93.2% -- analyzed in the model. *Indeed, the interference is so severe that there would be a total loss of service at 63 of the 73 bases stations, more than 86%.<sup>85</sup>*

The impact that continued operation of the wireless cable system in Socorro will have on the ability of MDS and ITFS licensees to provide two-way cellular services in Albuquerque is no aberration. A similar result was found when Kessler & Gehman studied the impact that continued operation of the current wireless cable system in Madison, WI will have on the base stations of two-way systems located far outside the service area of Madison (including base stations located in Chicago, Milwaukee and Rockford). A copy of that study is annexed as Attachment 2. Again, Kessler & Gehman examined the potential for cochannel interference to two-way cellular MDS/ITFS facilities modeled at the locations and heights of the Sprint PCS base stations in the region. And, again, Kessler & Gehman found that massive cochannel interference would result from the transmissions by Madison licensees of their signals well beyond the boundary of the Madison protected service area. For example, the analysis shows that continued operation of the Madison wireless cable system would result in interference at

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<sup>85</sup> The area shown in red on Exhibit 1 to the Kessler & Gehman report identifies those areas where there would be interference to a base station constructed at the average height of the base stations of the Sprint PCS affiliate in the region. As this illustrates, the problem is not caused by the location of the base stations, it is caused by the fact that the high-power, high-site transmission system in Socorro radiates signal well beyond it's the borders of its protected service area.

95% (228 of 240) of the base stations in the Milwaukee market, 97% (32 of 33) of the base stations in the Rockford BTA, and even 113 base stations as far away as the northwestern portion of the Chicago region.

In short, the WCA-NIA-CTN approach is essential if the objective they share with the Commission – finally seeing the emergence of MDS/ITFS spectrum as a home to advanced wireless services – is to be achieved. WCA, NIA and CTN have bent over backwards to accommodate the few remaining video system operators – grandfathering every one that has as little as 5 percent penetration or has converted to digital technology and cannot be accommodated in the MBS. To expand the exemption further to benefit a handful of systems serving just a handful of subscribers (all of whom have alternative sources of multichannel programming) would threaten the very viability of the band. As the operator of a small video system in rural Kentucky put it:

CNI recognizes that the rules and policies proposed in the White Paper are primarily designed to promote the deployment of the next generation of broadband technology, and impose certain inconveniences on those MVPDs who desire to continue to operate wireless cable systems following the transition of their markets pursuant to Appendix B of the White Paper. However, it is clear that if the MDS/ITFS band is ever to develop as a viable spectrum home for fixed, portable and mobile broadband services, the Commission must impose strict limits on the use of the Lower Band Segment and the Upper Band Segment by the type of high-power, high-site facilities used by most MVPDs today. The White Paper makes a compelling case that those high-power, high-site facilities pose a substantial threat of interference to next generation broadband systems that must be addressed in the new rules. The proposals advanced by WCA, NIA and CTN in Appendix B for addressing the transition of MVPD systems to the new bandplan and only exempting those that have significant penetration rates represent a fair balance of the competing interests. Although CNI will likely not be entitled to “opt-out” of a transition under the pending proposal, CNI nonetheless appreciates that if all video operators are grandfathered, there will be

substantial interference to broadband service providers and the MDS/ITFS bands are unlikely to develop.<sup>86</sup>

***E. The Commission Should Not Extend The Dates Set Forth In Appendix B Related To Transitions***

While the vast majority of commenting parties have no objection to the various timelines and essential dates set forth in Appendix B for a transition, some seek modifications that could increase the costs of transition or unnecessarily delay the transition process.

For example, one comment suggests that the Commission extend from 21 to 60 days the time afforded ITFS licensees to respond to the Pre-Transition Data Request.<sup>87</sup> WCA, NIA and CTN, which gave the timing involved with all aspects of the transition extraordinary attention when crafting their proposal, believe that this extension is unnecessary. The information required for an ITFS licensee to respond to a Pre-Transition Data Request is simple and straightforward,<sup>88</sup> relates solely to the ITFS licensee's own receive sites and programming, and should be readily available to the ITFS licensee at the time it receives the Pre-Transition Data Request.<sup>89</sup> To the extent that ITFS licensees do not maintain the information that will be required to respond to a Pre-Transition Data Request, there is ample opportunity between now and the time new rules go into effect to collect and thereafter systematically maintain accurate information.

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<sup>86</sup> CNI Comments, at 2-3.

<sup>87</sup> See Comments of Network for Instructional TV, *et al*, RM-10586, at 4 (filed Nov. 14, 2002) ("NITV Comments").

<sup>88</sup> See White Paper, App. B, at 15.

<sup>89</sup> To the extent that additional time is necessary in light of many schools' holidays and summer breaks, it may be appropriate for the Commission to waive the rule in extenuating circumstances. However, WCA, NIA and CTN would hope that such waivers would be few and far between.

SDA claims that WCA, NIA and CTN have proposed that the only ITFS receive sites entitled to receive a new downconverter as part of a transition are those installed as of the New Bandplan Rules Effective Date, and proposes that that date be extended until the date the licensee responds to the Pre-Transition Data Request.<sup>90</sup> However, SDA's reading of the white paper is not correct – the white paper specifically calls for the deployment of new downconverters at every ITFS receive site where:

“(i) a reception system was installed at that site on or before the date the ITFS licensee receives its Pre-Transition Data Request . . . ; (ii) the reception system was installed by or at the direction of the ITFS licensee; and (iii) that reception system is either (a) actually used to receive ITFS programming that comports with Section 74.931(a)(1) or (b) of the current Rules; or (b) is located at a cable television system headend and the cable system relays such ITFS programming.”<sup>91</sup>

The white paper does call for interference protection to be limited to those ITFS receive sites that were installed as of the New Bandplan Rules Effective Date.<sup>92</sup> The difference between the two dates is significant. In the case of setting eligibility for interference protection, WCA, NIA and CTN recognized that new receive sites could be added at strategic locations for greenmail or anticompetitive purposes. During the negotiations that led to the creation of the white paper, they considered a variety of possible cut-off dates (including as early as the date the white paper was filed), and settled on the New Bandplan Rules Effective Date as an appropriate balance that is fair to ITFS licensees, while limiting the potential for abuse. As part of the same balancing, WCA, NIA and CTN agreed that providing new downconverters to ITFS receive sites

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<sup>90</sup> See SDA Comments, at 12. IIT argues that all receive sites, not just those within the protected service area, should be entitled to a new downconverter. See IIT Comments, at 21. However, since receive sites outside the protected service area are specifically denied interference protection under Section 74.903(a)(5), which limits interference protection to the protected service area, the white paper calls for the obligation imposed on the Proponent to provide new downconverters to be similarly constrained. See White Paper, App. B, at 6-7.

<sup>91</sup> *Id.*, App. B, at 7.

<sup>92</sup> See White Paper, at 35.

installed even after the New Bandplan Effective Date would not open the door to significant abuses, since the cost of such downconverters is relatively low, and thus established the Pre-Transition Data Request date as the cut-off for establishing eligibility for new downconverters.

Similar concerns led WCA, NIA and CTN to propose that only video programming or data services in existence on December 31, 2002 or six months prior thereto should be entitled to migration to the MBS at the expense of the Proponent.<sup>93</sup> Once again, their objective was to be fair, while at the same time preventing abuses. Because the cost of transition will escalate sharply in markets where it is necessary to digitize video streams that are currently analog, WCA, NIA and CTN were concerned that some ITFS licensees might add additional video streams prior to the transition solely for the purpose of increasing their leverage over the Proponent. Thus, WCA, NIA and CTN do not endorse the suggestion of one filer that Proponents be required to migrate at their own expense any programming that is being offered when the transition process begins.<sup>94</sup>

#### **IV. THE COMMISSION SHOULD ADOPT THE PROPOSED APPROACH TO CREATING GEOGRAPHIC SERVICE AREAS.**

In the white paper, WCA, NIA and CTN called for the Commission to create exclusive Geographic Service Areas (“GSAs”) out of the current overlapping protected service areas in order to address the current inability of licensees to effectively serve in or around those overlap areas. Their proposal was the subject of concern by two commenting parties.

First, Stanford urges that rather than splitting overlapping protected service areas as proposed in Appendix A to the white paper, the Commission should allow licensees with

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<sup>93</sup> See *id.*, App. B, at 8.

<sup>94</sup> See IIT Comments, at 19.

overlapping protected service areas “to draw a boundary that better fits their targeted service areas.”<sup>95</sup> The white paper proposed just such an approach – WCA, NIA and CTN specifically proposed “that spectrum disaggregation and service area partitioning be permitted to the maximum extent possible, further enhancing the ability of licensees to tailor their service capabilities to their needs.”<sup>96</sup>

Stanford also appears to object to the proposal for establishing GSAs by splitting overlapping protected service areas due to a concern that “the service base that a station might have developed” within its current 35 mile service area would be lost.<sup>97</sup> Again, WCA, NIA and CTN believe that Stanford’s concern is addressed in the white paper, which provides that if an ITFS licensee has legitimate ITFS receive sites within its existing protected service area but outside its new GSA, those receive sites continue to receive interference protection.<sup>98</sup>

Second, Colorado State University (“CSU”), while conceding that it “is very attractive to draw the boundaries . . . between service areas as proposed in Appendix A,” suggests that “an engineering review to assess interference issues and determine overall the feasibility and advisability of the plan should be accomplished.”<sup>99</sup> There is ample evidence from other services,

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<sup>95</sup> Stanford Comments, at 9.

<sup>96</sup> White Paper, at 13. WCA, NIA and CTN question whether it would be appropriate to accommodate Stanford’s proposal that licensees with overlapping protected service areas be permitted to agree among themselves “to retain a partial overlap on a non-exclusive basis.” *See* Stanford Comments, at 4-5. As discussed in the white paper, overlapping service areas have historically led to “no man’s land” that neither licensee has been able to serve. *See* White Paper, at 21. It is not clear that Stanford’s concerns can be addressed without undermining the effort to afford each licensee an exclusive GSA.

<sup>97</sup> *See* Stanford Comments, at 4-5.

<sup>98</sup> *See* White Paper, at 35-36.

<sup>99</sup> Comments of Colorado State University, RM-10586, at 1-2 (filed Nov. 14, 2002)(“CSU Comments”), CSU also questions who is entitled to be a Proponent and how disputes are addressed in the event more than one entity seeks to be a Proponent. *See id.* at 2. As explained in the white paper, a Proponent can be any MDS or ITFS licensee or a person leasing capacity from an MDS or ITFS licensee and acting pursuant to its contractual rights. *See* White

such as broadband PCS, that services are viable when the Commission uses geographic licensing in the manner proposed in the white paper. If CSU's concern is with regard to the impact of the proposal advanced in Appendix A on existing service offerings (as opposed to the viability of new services), it is important to note that WCA, NIA and CTN have proposed that all existing facilities be grandfathered, even if they do not comply with cochannel interference protection benchmarks at the new GSA boundary. As explained in the white paper, ITFS facilities on the MBS channels would be grandfathered *ad infinitum*, while facilities on the non-MBS channels would be grandfathered until the transition to the new bandplan.<sup>100</sup> Thus, as a practical matter neither CSU nor any other ITFS licensee would suffer an adverse technical impact as a result of the establishment of GSAs.

## V. MISCELLANEOUS MATTERS

### ***A. The Commission Should Not Preclude Eligible Educators From Utilizing Funds Provided By Third Parties To Purchase ITFS Spectrum At Auction.***

WCA, NIA and CTN are concerned with the proposal of SDA to ban participants in auctions of ITFS spectrum from utilizing funds provided by third parties to purchase spectrum at auction.<sup>101</sup> While the members of SDA may be able to participate in auctions without securing

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Paper, App. B, at 1. The licensees that a given Proponent can draw into a transition are identified through application of the rules set forth in Section III.A of Appendix B to the white paper. Where there are multiple parties desiring to be the Proponent, WCA, NIA and CTN have proposed that:

“the Proponent” can be a joint undertaking of licensees and/or lessees. In the event a single licensee or lessee commences a transition process, it can subsequently permit other licensees or lessees to join it as “the Proponent” by providing notice to the other participants in the transition process.

White Paper, App. B, at 16 n. 9. However, in cases where multiple parties have commenced the transition process and do not agree to jointly serve as the Proponent, WCA, NIA and CTN have proposed that Proponent status be afforded to the party that first served all of its required Transition Notices. *See id.*

<sup>100</sup> *See* White Paper at 21-22.

<sup>101</sup> *See* SDA Comments, at 14.

additional funding from other sources, many educators eligible to participate in future ITFS auctions may be hard-pressed to use scarce educational resources to purchase spectrum without assistance from third parties such as supporting foundations, substantial charitable donors, grant-making agencies, and, of course, excess capacity lessees. SDA's proposal appears to favor certain non-profit entities with their own resources over educators that may have to seek funding from other sources.

WCA, NIA and CTN do not see any reasoned basis to suggest that well-heeled non-profit entities should generally prevail in auctions over typical educators. Moreover, allowing third party funding of ITFS auction bids should not skew the bidding process in such a way as to result in a winning bidder that is any less likely to utilize its spectrum effectively. That is, after all, one of the Commission's major goals for the auction process. Indeed, if anything, permitting all bidders to marshal all their potential resources may result in the ITFS spectrum obtained at auction being devoted to its highest and best use.

***B. This Proceeding Should Not Interfere With Private Spectrum Leases***

In responding to the *Public Notice*, several parties expressed concerns as to the impact that adoption of the proposed rules would have on existing leases for MDS and ITFS spectrum.<sup>102</sup> The short answer is that WCA, NIA and CTN have not asked the Commission to preempt or otherwise address any existing contractual relationship. As with any change in MDS/ITFS regulation, the impact of the change on any given MDS or ITFS lease must be decided under applicable contract law, based on the language of the particular agreement and the governing state law. Given the wide variety of leasing arrangements that currently exist within

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<sup>102</sup> See Atlanta ITFS Comments, at 1-2; MMDS Licensee Comments, at 8.

the industry, it is not realistic to expect the Commission to accept the proposal by the MLC to “resolve their status generically.”<sup>103</sup>

***C. The Commission’s New Rules For The Non-MBS Channels Should Move Away From Regulating Based On Predicted Interference.***

In the white paper, WCA, NIA and CTN have proposed that for the non-MBS channels, the Commission move away from the current regulatory approach of restricting facilities based on predicted levels of interference towards rules designed to prevent actual interference. Alone among all those who have participated in the WCA Technical Task Group or filed comments in response to the *Public Notice*, Dallas MDS claims that “such a requirement [of taking field measurements] would be onerous on licensees,” and suggests that the Commission retain the current approach of regulating based on propagation studies and adopt a specific model.<sup>104</sup>

However, Dallas MDS provides no indication of why protecting non-MBS operations based on actual interference is “onerous” on licensees. Indeed, the record before the Commission is clear that the use of a propagation model designed to model interference from ubiquitous subscriber units (the infamous Appendix D) is onerous. What Dallas MDS fails to appreciate is that the models it proposes to use are propagation models only, and do not predict the undesired signal levels that will occur at a given point from portable or mobile subscriber units that may be located anywhere at any time. It is the need for such a prediction under the current rules that led to the complexity in Appendix D, and it is that complexity that WCA, NIA and CTN are attempting to eliminate. Indeed, Dallas MDS fails to advance a single public

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<sup>103</sup> MMDS Licensee Comments, at 8. However, WCA, NIA and CTN do agree with SDA that the Commission should declare that agreements between co-channel licenses regarding the use of frequency offset technology “are enforceable only to the extent that they govern analog operations in the MBS.” SDA Comments, at 11.

<sup>104</sup> See Dallas MDS Comments, at 8-9.

interest benefit that would be achieved by continuing to regulate the LBS/UBS in a manner that restricts the ability of licensees to provide new services because a conservative propagation model predicts interference that in fact does not occur.

***D. Safe Harbor #4 Does Not Require Pro Rata Apportionment Between MDS Lottery Winners And Grandfathered E/F Group ITFS Licensees.***

In crafting an approach to transitions to the new bandplan by ITFS licensees, it was necessary to address a situation that, while not the norm, is not atypical – rather than having a single licensee for a four-channel group in a given area, there are two or more licensees each licensed to one or more channels. In most cases, this situation arose when two or more mutually-exclusive applicants for a given channel group entered into a settlement agreement pursuant to which each received one or more channels at a collocated site,<sup>105</sup> although there are numerous other circumstances that have given rise to shared channel groups. Safe Harbor #4 in Appendix B was designed to provide Proponents and licensees guidance as to how reasonable Transition Plans could be crafted in such situations.

Stanford notes that some E and F Group MDS lottery winners have only “incipient” rights within their service areas. That is, although their applications may have prevailed in lotteries conducted often more than a decade ago, some MDS lottery winners have yet to construct actual facilities because they have been unable to satisfy licensing conditions requiring that they either provide the requisite interference protection to one or more nearby grandfathered E or F ITFS licensees or secure the consent of those licensees.<sup>106</sup> Stanford expresses concern

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<sup>105</sup> For example, if Applicant X and Applicant Y each sought the four A Group channels, they might agree that Applicant X would receive channels A1 and A2, while Applicant Y would receive channels A3 and A4.

<sup>106</sup> Stanford Comments, at 5-6.

that Safe Harbor #4 in Appendix B could permit such a lottery winner to gain access to two unencumbered channels through a pro-rata apportionment of the four channels in the group at the expense of the grandfathered E or F licensee.<sup>107</sup> Simply stated, it was not the intent of WCA, NIA and CTN that Safe Harbor #4 would apply in such a situation and require the ITFS licensee to divest itself of channels.<sup>108</sup>

The only situation in which a *pro rata* apportionment is contemplated is where two or more licensees actually share a single channel group, as described in Safe Harbor #4.<sup>109</sup> Accordingly, no MDS lottery winner that has been unable to construct facilities because of its interference protection obligations to a grandfathered ITFS licensee could claim a right to channel apportionment under Safe Harbor #4. If situations involving lottery winners that have never been able to construct facilities do exist, WCA, NIA, and CTN are confident that reasonable, individualized solutions can be developed.

## VI. CONCLUSION

The comments submitted in response to the *Public Notice* evidence overwhelming support for the adoption of the rules and policies proposed in the white paper. Therefore, WCA,

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<sup>107</sup> *See id.*

<sup>108</sup> In most cases, the lottery winner has either forfeited its authorization or has been able to satisfy its protection obligations by relocating and/or modifying its transmission system so that protected ITFS receive sites are not threatened with interference. In such cases, the white paper contemplates the MDS licensee and the grandfathered ITFS licensee would each secure exclusive GSAs through the mechanism described in Appendix A and that the grandfathered ITFS licensee would be permitted to deploy within its exclusive GSA free from the restrictions on facility modification imposed by the Commission when it reallocated the E and F Group channels to MDS in 1983. *See White Paper*, at 51, App. A, at 1.

<sup>109</sup> *See White Paper*, App. B at 24-25. WCA, NIA and CTN are unaware of any situation where an MDS lottery winner and a grandfathered ITFS licensee share a single channel group in this manner (*e.g.*, a MDS licensee has E1 and E2 and an ITFS licensee has E3 and E4).

NIA and CTN urge the Commission to expeditiously issue a notice of proposed rulemaking proposing to adopt those rules and policies.

Respectfully submitted,

THE WIRELESS COMMUNICATIONS  
ASSOCIATION INTERNATIONAL, INC.

THE NATIONAL ITFS ASSOCIATION

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November 29, 2002

ATTACHMENT 1

**KESSLER & GEHMAN ANALYSIS OF  
POTENTIAL INTERFERENCE FROM SOCORRO, NM WIRELESS CABLE SYSTEM  
TO TWO-WAY OPERATIONS IN ALBUQUERQUE PSA**

# **A Study of the Impact of the Socorro, NM MMDS/ ITFS Video Operation on Sprint's Los Alamos, NM Affiliate Cell Sites in the Albuquerque, NM PSA**

## **Introduction**

In comments submitted to the Federal Communications Commission in response to the White Paper submitted on October 7, 2002 by the Wireless Communications Association International, Inc. ("WCA"), the National ITFS Association ("NIA") and Catholic Television Network ("CTN"), operators of analog video systems that have achieved less than 5% penetration have urged the Commission to permit them to "opt-out" from transitioning to the proposed new bandplan. Kessler & Gehman Associates, Inc. has been retained on behalf of WCA, NIA and CTN to analyze the potential adverse impact that grant of this request could have on the provision of two-way cellularized services in neighboring markets.

For purposes of this analysis, we have chosen to study the impact that continued operation of the high-power, high-site video operation in Socorro, NM would have on the ability of Sprint Corp., the lessee of several of the Albuquerque, NM MDS stations to provide two-way cellular service. In conducting this analysis we have utilized the actual transmitting parameters of the Socorro facilities and have assumed (based on advice from Sprint that such an assumption is reasonable) that the Sprint broadband system will collocate its MDS/ITFS facilities with the existing Sprint Los Alamos, NM affiliate PCS base station network in the region.

Our analysis has concluded that continued operation of the Socorro system in its current configuration will have a substantial detrimental impact on Sprint's ability to deploy two-way services in Sprint's markets. This is best illustrated by Exhibit 1, which shows in red the substantial area in which continued operation of the Socorro system will preclude reasonable Sprint facilities due to co-channel interference.

## **Summary**

Interference summary to Sprint's 73 Albuquerque, NM PSA cell sites: **Interference to 68 of 73 (93.2%)**

## **Methodology**

The accompanying map exhibit (Exhibit 1) and graph (Exhibit 2) provide received power level ("RPL") results at Sprint's existing cell sites within the Albuquerque, NM PSA. The maximum RPL used to be considered interference-free is -107.0 dBmW and was calculated using the authorized interfering Socorro, NM facilities (a standard Andrew HMD16HO transmitting antenna with -0.5° electrical beam tilt at 7,281' R.C. ("radiation center") AMSL ("above mean sea level"), 24.0 dBw EIRP ("effective isotropic radiated power") at 34°04' 18"/ 106°57' 44") as the transmitted signal source to each of the 73 cell sites using a 17.0 dBi gain receiving antenna at their actual heights. The actual elevation pattern data for the Socorro Andrew HMD16HO transmitting antenna was used in the calculations. The "Free Space + RMD" propagation model was used. A center frequency of 2,628.25 MHz was used. The -107.0 dBmW maximum RPL for interference-free consideration is based on 6 dB below the noise floor (-101) which includes a 5 dB receiver noise figure.

## **Summary of Results**

68 of the 73 total cell sites (93.2%) would receive a signal level greater than -107.0 dBmW. Of these 68 interfered-with cell sites, the furthest one from the Socorro facilities is 187.4 km (116.4 miles). Of the cell sites receiving interference, the lowest cell site antenna height is 6.0 meters (19.7 feet) AGL. The average cell site antenna height for all 73 of Sprint's Albuquerque, NM PSA cell sites is 24.1 meters (79.1 feet) above ground level/ 1,727.4 meters (5,667.3 feet) above mean sea level.

## **Exhibits**

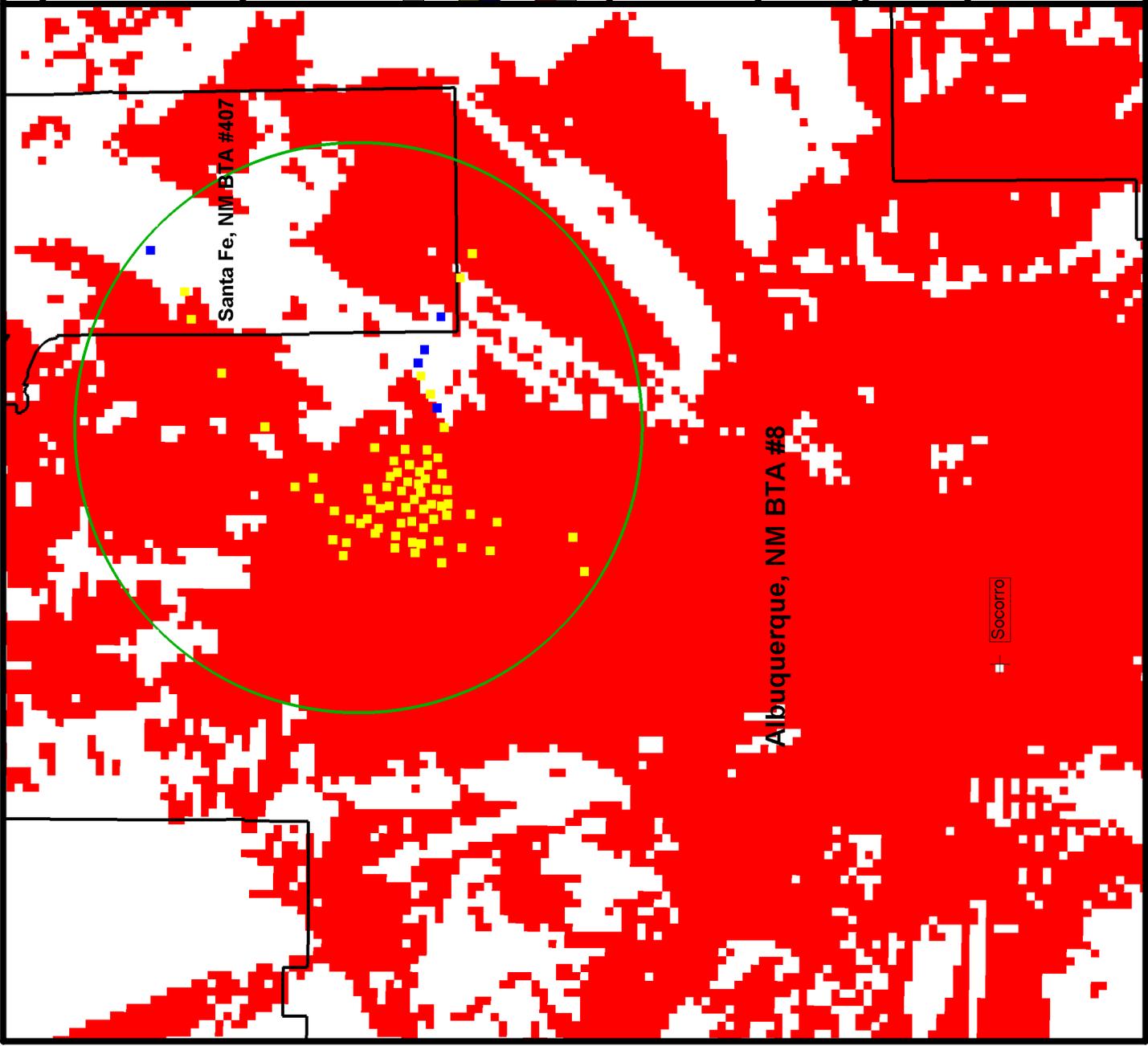
**Exhibit 1** is a map exhibit showing 1) the RPL results to Sprint's 73 Albuquerque, NM PSA cell sites, 2) the area-wide RPL results around the Socorro facilities using a receiving antenna height of 79.1 feet AGL (the average of all 73 of Sprint's Albuquerque, NM PSA cell sites), 4) the Albuquerque, NM 35-mile PSA, 5) the Albuquerque, NM BTA #8, and 6) the Santa Fe, NM BTA #407.

**Exhibit 2** is a bar graph summary showing the signal impact that the Socorro system would have on Sprint's 73 Albuquerque, NM PSA cell sites. The graph also indicates the severity of the Socorro signal impact at the cell sites four levels as follows:

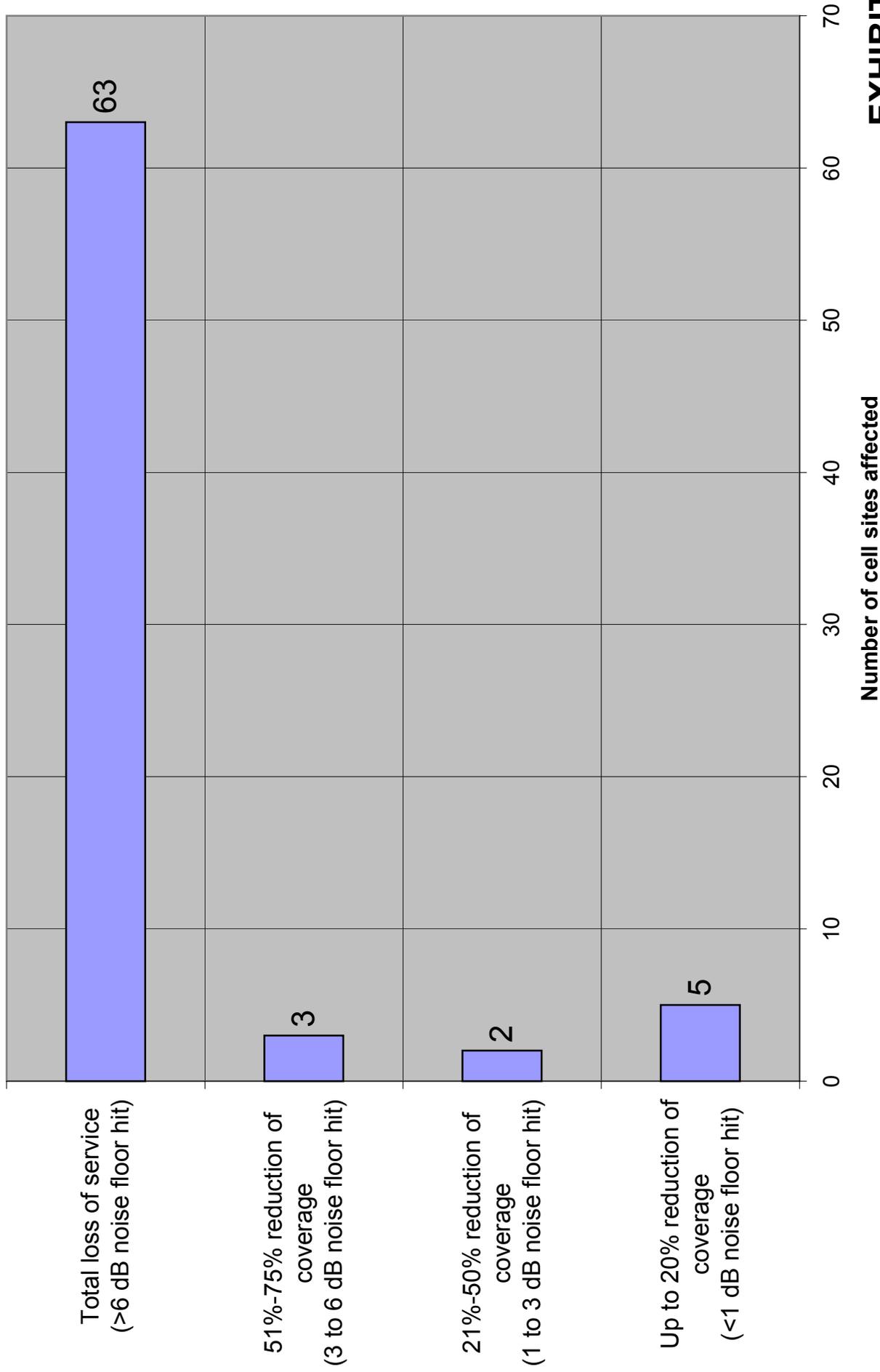
- 1) "Up to 20% reduction of coverage"- Indicates a noise floor level increase of < 1 dB
- 2) "21%-50% reduction of coverage"- Indicates a noise floor level increase of 1-3 dB
- 3) "51%-75% reduction of coverage"- Indicates a noise floor level increase of 3-6 dB
- 4) "Total loss of service"- Indicates a noise floor level increase of > 6 dB

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EDX SignalPro™: Socorro to Albuquerque	
Prop. model: Free Space + RMD	
Time: 10.0% Loc.: 50.0%	
Prediction Confidence Margin: 0.0dB	
Climate: Continental Temperate	
Land use (clutter): none	
Atmospheric Abs.: none	
K Factor: 1.333	
RX Antenna - Type: OMNI	
Ave. cell ant. height: 79.1 ft AGL	Gain: 17.0 dBi
<b>Sites</b>	
Site: Socorro	
N34°04'18.00" W106°57'44.00"	7158.0 ft
Soc11 * Tx.Ht.AGL: 123.0 ft	Total ERP: 24.00 dBW
Model: 1	directional-horizontal/0.0° 2628.25 MHz
<p>Albuquerque, NM 35-mile PSA</p> <p>received signal level at cell antenna</p> <p>&gt; -107.0 dBmW</p> <p>&lt; -107.0 dBmW</p> <p>Received Power at remote</p> <p>&gt; -107.0 dBmW</p> <p>&lt; -107.0 dBmW</p> <p>Display threshold level: -250.0 dBmW</p>	
<b>Notes</b>	
Auth. Socorro F1-4/ WMI417 with Andrew HMD16HO with -0.5 degrees elec. beam tilt.	
Sprint cell sites shown by yellow & blue squares.	
Cell site antenna height used for the red study area is 79.1 feet AGL.	
<p>MILES</p> <p>-5 0 20</p>	
<p><b>SOCORRO, NM</b></p> <p>AUTHORIZED TRANS. PARAMETERS</p> <p>20021127</p> <p>EXHIBIT 1</p>	



# Impact of Socorro, NM on Sprint's Albuquerque, NM PSA cell sites



Number of cell sites affected

ATTACHMENT 2

**KESSLER & GEHMAN ANALYSIS OF  
POTENTIAL INTERFERENCE FROM MADISON, WI WIRELESS CABLE SYSTEM  
TO TWO-WAY OPERATIONS IN NEIGHBORING BTAS**

# **A Study of the Impact of the Madison, WI MMDS/ ITFS Video Operation on Sprint Cell Sites in Milwaukee, WI, Chicago, IL, and Rockford, IL**

## **Introduction**

In comments submitted to the Federal Communications Commission in response to the White Paper submitted on October 7, 2002 by the Wireless Communications Association International, Inc. ("WCA"), the National ITFS Association ("NIA") and Catholic Television Network ("CTN"), operators of analog video systems that have achieved less than 5% penetration have urged the Commission to permit them to "opt-out" from transitioning to the proposed new bandplan. Kessler & Gehman Associates, Inc. has been retained on behalf of WCA, NIA and CTN to analyze the potential adverse impact that grant of this request could have on the provision of two-way cellularized services in neighboring markets.

For purposes of this analysis, we have chosen to study the impact that continued operation of the high-power, high-site video operation in Madison, WI would have on the ability of Sprint Corp., the holder of the Basic Trading Area ("BTA") authorizations for Madison, WI #272, Milwaukee, WI #297, Chicago, IL #78, Rockford, IL #380, Sheboygan, WI #417 and Fond du Lac, WI #148 and the licensee or lessee of numerous MDS and ITFS stations in those BTAs, to provide two-way cellular service. In conducting this analysis we have utilized the actual transmitting parameters of the Madison facilities and have assumed (based on advise from Sprint that such an assumption is reasonable) that the Sprint broadband system will collocate its MDS/ITFS facilities with the existing Sprint PCS base station network in the region.

Our analysis has concluded that continued operation of the Madison system in its current configuration will have a substantial detrimental impact on Sprint's ability to deploy two-way services in Sprint's markets. This is best illustrated by Exhibit 1, which shows in red the substantial area in which continued operation of the Madison system will preclude reasonable Sprint facilities due to co-channel interference.

## **Summary**

Interference summary to Sprint's Milwaukee, WI region, Chicago, IL, and Rockford, IL region cell sites:

Milwaukee, WI and Chicago, IL regions: 1,104 total cell sites- **Interference to 342 of 1,104 (31.0%)**

Milwaukee, WI region: 240 total cell sites- **Interference to 228 of 240 (95.0%)**

Chicago, IL region: 864 total cell sites- **Interference to 114 of 864 (13.2%)**

Rockford, IL BTA #380: 33 total cell sites- **Interference to 32 of 33 (97.0%)**

## **Methodology**

The accompanying map exhibit (Exhibit 1) and graph (Exhibit 2) provide received power level ("RPL") results at Sprint's existing cell sites in and around its Milwaukee, WI and Chicago, IL regions, and in the Rockford, IL BTA #380. The maximum RPL used to be considered interference-free is -107.0 dBmW and was calculated using the authorized interfering Madison, WI facilities (a standard Andrew HMD12VO transmitting antenna with -0.5° electrical beam tilt at 2,233' R.C. ("radiation center") AMSL ("above mean sea level"), 24.0 dBw EIRP ("effective isotropic radiated power") at 43°03' 21"/ 89°32' 05") as the transmitted signal source to each of the 1,104 cell sites using a 17.0 dBi gain receiving antenna at the specific heights (AGL) shown in the tabulation. The actual elevation pattern data for the Madison Andrew HMD12VO transmitting antenna was used in the calculations. The "Free Space + RMD" propagation model was used. A

center frequency of 2,628.25 MHz was used. The -107.0 dBmW maximum RPL for interference-free consideration is based on 6 dB below the noise floor (-101) which includes a 5 dB receiver noise figure.

## **Summary of Results by Region**

Milwaukee, WI and Chicago, IL regions: 1,104 total cell sites- 342 of the 1,104 total cell sites (31.0%) would receive a signal level greater than -107.0 dBmW. Of these 342 interfered-with cell sites, the furthest one from the Madison facilities is 174.4 km/ 108.4 miles. Of the cell sites receiving interference, the lowest cell site antenna height is 40 feet AGL. The average cell site antenna height for all 1,104 of Sprint's Chicago, IL region & Milwaukee, WI region cell sites is 33.3 meters (109.3 feet) above ground level/ 250.9 meters (823.2 feet) above mean sea level.

Milwaukee, WI region: 240 total cell sites- 228 of the 240 total cell sites (95.0%) would receive a signal level greater than -107.0 dBmW. Of these 228 interfered-with cell sites, the furthest one from the Madison facilities is 144.9 km/ 90.0 miles. Of the cell sites receiving interference, the lowest cell site antenna height is 40 feet AGL. Note: The 240 Milwaukee, WI region cell sites include cell sites in the Janesville-Beloit, WI BTA #216. The average cell site antenna height for all 240 of Sprint's Milwaukee, WI region cell sites is 34.8 meters (114.2 feet) above ground level/ 292.5 meters (959.6 feet) above mean sea level.

Chicago, IL region: 864 total cell sites- 114 of the 864 total cell sites (13.2%) would receive a signal level greater than -107.0 dBmW. Of these 114 interfered-with cell sites, the furthest one from the Madison facilities is 174.4 km/ 108.4 miles. Of the cell sites receiving interference, the lowest cell site antenna height is 57 feet AGL. Note: The 864 Chicago, IL region cell sites include cell sites in the Rockford, IL BTA #380. The average cell site antenna height for all 864 of Sprint's Chicago, IL region cell sites is 32.9 meters (107.9 feet) above ground level/ 239.3 meters (785.1 feet) above mean sea level.

Rockford, IL BTA #380 33 total cell sites- 32 of the 33 total cell sites (97.0%) would receive a signal level greater than -107.0 dBmW. Of these 33 interfered-with cell sites, the furthest one from the Madison facilities is 157.9 km/ 98.1 miles. Of the cell sites receiving interference, the lowest cell site antenna height is 90 feet AGL. The average cell site antenna height for all 33 of Sprint's Rockford, IL BTA #380 cell sites is 57.4 meters (188.3 feet) above ground level/ 308.0 meters (1,010.5 feet) above mean sea level.

## **Exhibits**

**Exhibit 1** is a map exhibit showing 1) the RPL results to Sprint's 240 Milwaukee, WI region cell sites, 2) the RPL results to Sprint's 864 Chicago, IL region cell sites, 3) the area-wide RPL results around the Madison facilities using a receiving antenna height of 109.3 feet AGL (the average of all 1,104 of Sprint's Milwaukee, WI region and Chicago, IL region cell sites), 4) the Milwaukee, WI 35-mile PSA, 5) the Fond du Lac, WI 35-mile PSA, 6) the Green Bay, WI 35-mile PSA, 7) the Rockford, IL 35-mile PSA, 8) the Chicago, IL 35-mile PSA, 9) the Milwaukee, WI BTA #297, 10) the Janesville-Beloit, WI BTA #216, 11) the Chicago, IL BTA #78, 12) the Rockford, IL BTA #380, 13) the Michigan City-La Porte, IN BTA #294, 14) the Benton Harbor, MI BTA #39, 15) the Madison, WI BTA #272, and 16) the Sheboygan, WI BTA #417.

**Exhibit 2** is a bar graph summary showing the signal impact that the Madison system would have on Sprint's cell sites in and around its Milwaukee, WI and Chicago, IL regions, and in the Rockford, IL BTA #380. The graph also indicates the severity of the Madison signal impact at the cell sites four levels as follows:

- 1) "Up to 20% reduction of coverage"- Indicates a noise floor level increase of < 1 dB
- 2) "21%-50% reduction of coverage"- Indicates a noise floor level increase of 1-3 dB

- 3) "51%-75% reduction of coverage"- Indicates a noise floor level increase of 3-6 dB
- 4) "Total loss of service"- Indicates a noise floor level increase of >6 dB

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EDX SignalPro™: Madison-Milwaukee, WI

Prop. model: Free Space + RMD  
Time: 10.0% Loc.: 50.0%  
Prediction Confidence Margin: 0.0dB  
Climate: Continental Temperate  
Land use (clutter): none  
Atmospheric Abs.: none  
K Factor: 1.333  
RX Antenna - Type: OMNI  
Ave. cell ant. Height: 109.3 ft AGL Gain: 17.0 dBi

- Milwaukee, WI 35-mile PSA
- Fond du Lac, WI 35-mile PSA
- Green Bay, WI 35-mile PSA
- Rockford, IL 35-mile PSA
- Chicago, IL 35-mile PSA

received signal level at cell antenna

> -107.0 dBmW  
< -107.0 dBmW

Sites

Site: Mad1S  
N43°03'21.00" W89°32'05.00" 1126.0 ft  
Mad11 \* Tx.Ht.AGL: 1107.0 ft Total ERP: 24.00 dBW  
Model: 1 directional-vertical/0.0° 2628.2500 MHz

Notes

Auth. Madison F1-4/ WHT772 with Andrew HMD12VO  
with -0.5 degrees elec. beam tilt.  
Sprint cell sites yellow or blue squares  
Cell site antenna height used for the red study area  
is 109.3 feet AGL.

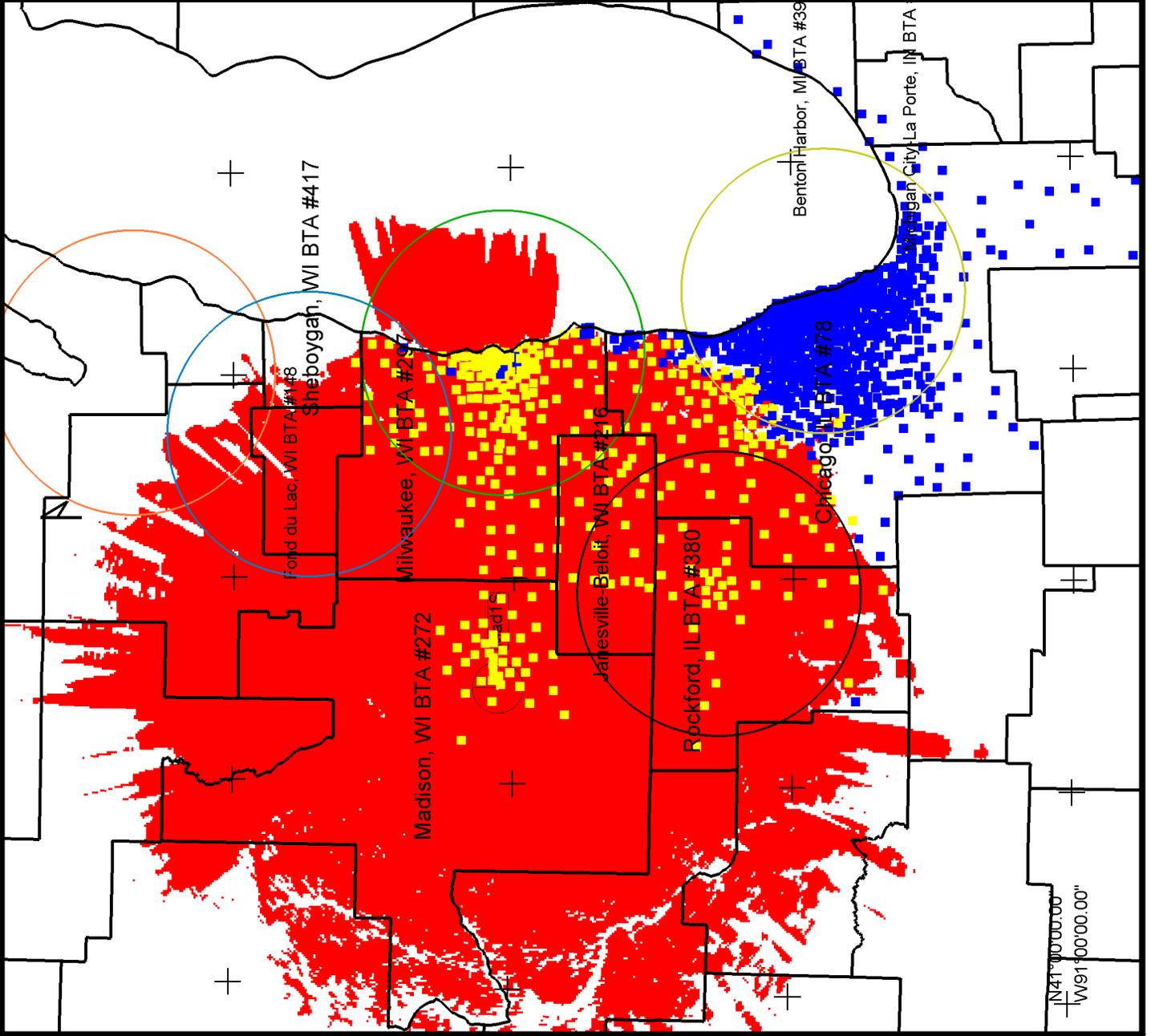


MADISON, WI

AUTHORIZED TRANS. PARAMETERS  
EXHIBIT 2

20021121

EXHIBIT 1



# Impact of Madison, WI on Sprint's Chicago, IL & Milwaukee, WI region cell sites

