BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C.

In the Matter of	
Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems	ET Docket No. 00-258
The Establishment of Policies and Service Rules for the Mobile-Satellite Service in the 2 GHz Band	IB Docket No. 99-81 ET Docket No. 95-18
Amendment of U.S. Table of Frequency Allocations to Designate the 2500-2520/2670-2690 MHz Frequency Bands for the Mobile-Satellite Service	RM-9911
Petition for Rule Making of the Wireless Information Networks Forum Concerning the Unlicensed Personal Communications Service	RM-9498
Petition for Rule Making of UTStarcom, Inc., Concerning the Unlicensed Personal Communications Service	RM-10024

TO: THE COMMISSION

COMMENTS
OF DCT LOS ANGELES, L.L.C.
ON THE THIRD NOTICE OF PROPOSED RULE MAKING

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SUMMARY

The DCT Los Angeles, L.L.C. ("DCT"), holds two MDS 2 licenses in the Los Angeles, CA area. Like the vast majority of incumbent MDS 1 and 2 licensees, and all BTA authorization holders, DCT paid for its licenses. DCT has participated in these proceedings during the over 3 year period during which MDS 1 and 2 have been targeted for relocation. Consistently, DCT has asked the Commission to make a decision on MDS 1 and 2 to remove the stifling regulatory cloud. DCT makes that request once again.

In addition, DCT has asked the Commission to provide MDS 1 and 2 with flexible use authority, which will allow an incremental but an important expansion of its competitive and service capabilities consistent with Commission policy on flexible use grants. At the Commission's request, DCT has revisited this request in light of the requirements of the Communications Act and contemporary policy and remains convinced that granting flexible use authority to MDS 1 and 2 should be a foregone conclusion.

While DCT has in past comments argued against the relocation of MDS 1 and 2, DCT now recognizes the need to make a relocation based upon the displacement of most of MDS 1. MDS 1 and 2 are interdependent, as a practical matter, and their relocation should be made in a complementary manner. After reviewing available relocation bands, it is DCT's conclusion that TDD relocation options are poor, requiring the Commission to relocate MDS 1 and 2 so that FDD-based flexible use and fixed use options are supported. Few available bands offer both the bandwidth and the compatibility with adjacent band uses required for this purpose. In DCT's view, the best and probably only feasible relocation bands are the 1910-1916 MHz and 1990-

1996 MHz bands. This allocation should be made on an exclusive basis, as band sharing is not feasible given MDS's past and expected future uses. Digital compression as a means of reducing this spectral need also is not an option, because MDS 1 and 2 already have digital authority.

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COMMENTS
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DCT Los Angeles, L.L.C. ("DCT"), by and through its attorneys, hereby submits these comments in response to the *Third Notice of Proposed Rulemaking* (the "*Third Notice of Proposed Rulemaking*") in the above-referenced proceedings, released on February 10, 2003 (FCC 03-16), 68 Fed. Reg. 12015 (Mar. 13, 2003).

I. DCT'S INTEREST IN THESE PROCEEDINGS

DCT is the licensee of two MDS 2 stations operating in the 2156-2162 MHz band – Anaheim, CA MDS station WGX394 and San Bernardino, CA MDS station WHT573 (collectively the "Stations"). Accordingly, DCT is interested in these proceedings.

II. MDS 1 & 2 LICENSEES PAID FOR THEIR SPECTRUM AND USE IT

An increasingly tiresome and irrelevant claim of those desirous of the MDS spectrum between 2150 and 2162 MHz is that the MDS licensees did not pay for that spectrum. Moreover, while some MDS 1 and 2 licenses were not purchased, the vast majority of incumbent licenses were purchased from prior licensees and all BTA-derived MDS 1 and 2 station licenses were purchased at FCC auction.[1] DCT paid fair market value for its Stations.[2] The financial investment of MDS 1 and 2 licensees stands in sharp contrast to MSS licensees who obtained access to large amounts of paired bands, including terrestrial mobile allocations, for free. Claims that MDS 1 and 2 licensees did not "pay" for their spectrum are simply no more than false and misleading distractions.

Some desirous of the MDS 1 and 2 spectrum claim that the MDS 1 and 2 licensees are making little use of the spectrum. That is absolutely false as a historical matter, fails to reflect that most of these licensees paid fair market value for the spectrum, fails to consider the extra-

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[1] James H. Wiesenberg, a founder of DCT with a long history in MDS, reviewed MDS inventories and determined that over 60% of the incumbent MDS authorizations have been sold or subject to a transfer of control in which the licensee or its parent was sold. In conducting this study, he only counted an incumbent license as sold (or the licensee sold) if he was either personally aware of the sale or the MDS inventory showed a sale as indicated by the grant of an assignment or transfer application. This study understates the number of sold licenses and transferred licensees, as (i) the available inventories were at least 4 years old, and thus do not pick up stations sold and licensee control transfers during that time, and (ii) the inventories do not always show transfers and assignments that occurred much earlier in time.

[2] DCT purchased the license for the Anaheim MDS 2 station in 1991 from the original licensee, Broadcast Data Corporation, in a private transaction. DCT acquired the license for the

market impairment of business plans and prospects resulting from the fact that MDS 1 and 2 have been under consideration for reallocation for more than 3 years,[3] and fails to consider Chairman Powell's recent observations with respect to the identically-regulated MMDS in the 2.5 GHz band:

> "[MDS] has labored for years under the heavy hand of command-and-control regulation. The regime has not served the American people or the Commission's licensees particularly well. Our rules have, at times, been complex and stifling, and have shifted in their objectives – from promoting competition in the MVPD market to offering rural broadband solutions."[4]

DCT has participated actively in these proceedings by filing comments. A consistent theme of these comments has been for the Commission to, first and foremost, make a decision on the future spectral home of MDS 1 and 2 to eliminate the regulatory cloud. DCT is pleased to see that the *Third Notice of Proposed Rulemaking* sets the stage for a final decision on MDS 1 and 2. While DCT argued against any reallocation of MDS 1 and 2 in earlier stages of these proceedings, the successive series of decisions in these proceedings appear to dictate a relocation of MDS 1 and 2 and, thus, where those systems should go is the focus of these comments.[5]

San Bernardino MDS 2 station in March 1993 through a competitive auction held on behalf of The Microband Companies Inc. in the context of a bankruptcy proceeding.

[3] The Commission announced its proposal to strip the upper 1/3rd of MDS 2 in the *Policy Statement in the Matter of Principles for Reallocation of Spectrum to Encourage the Development of Telecommunications Technologies for the New Millennium*, ¶ 23, FCC 99-354 (rel. Nov. 22, 1999) ("*Policy Statement*").

[4] Separate Statement of Chairman Michael K. Powell, to *Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands (RM-10586); et al.* FCC 03-56 (adopted March 13, 2003) (WT Docket Nos. 02-68, 03-66, 03-67, and MM Docket No. 97-217) (the "*Flexible Use Technical Implementation NPRM*").

[5] DCT's relocation band focus has been restricted to bands identified in these proceedings as available for relocation. DCT believes that other bands can only be considered in the context of another notice of proposed rule making, the issuance of which will protract these proceedings further. A rapid conclusion of these proceedings must be a high priority, as these proceedings cause great uncertainty for bands subject to possible reallocation, resulting in financial harm to licensees and users of those bands and their ability to use those bands in the public interest.

III. MDS 1 & 2 SHOULD HAVE THE OPTION OF FLEXIBLE USE CONSISTENT WITH COMMISSION POLICY AND TO ENJOY A LEVEL PLAYING FIELD

In the *Third Notice of Proposed Rulemaking*, the Commission asks whether MDS 1 and 2 should be accorded flexible use authorization. In DCT's view, there is no good argument against granting this authority.

At present, MDS 1 and 2 can be operated in two-way systems. Adding flexible use to this pre-existing authority would allow an incremental increase in the capabilities of these channels. Absent this authority, MDS 1 and 2 would be virtually the only commercial spectrum below three GHz used primarily for direct service to the public that does not have this authority or has not been proposed for this authority. To use Chairman Powell's words, this "additional option"[6] conduces to more efficient use of the spectral resource.[7] Flexibility in addressing the market would be enhanced, as would the ability of these systems to compete.

Section 303(y) of the Communications Act[8] specifies those prerequisites to the grant of flexible use authority. Clearly, MDS 1 and 2 satisfy those prerequisites. First, flexible use must be consistent with international agreements. Like 2.5 GHz MMDS, a mobile allocation for MDS 1 and 2 (both in their present band and potential relocation bands discussed below) is contemplated for ITU Region 2, as indicated in Rule 2.106.

Second, Section 303(y) requires three Commission findings, in its clauses (2)(A), (2)(B) and (2)(C), which the Commission can and should make for MDS 1 and 2. Clause (2)(A) requires a Commission finding that flexible use is in the public interest. As explained above, distinct and

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Accordingly, a consideration of bands not already identified in these proceedings should be avoided to the maximum extent possible.

[6] Separate Statement of Chairman Michael K. Powell to *Flexible Use Technical Implementation NPRM*. While Chairman Powell made this statement in describing 2.5 GHz MDS, it is regulated identically to 2.1 GHz MDS.

[7] *Policy Statement*, *supra*, at ¶ 9.

significant public interest benefits can be expected to flow from allowing the flexible use of MDS 1 and 2. The Commission's finding of the public interest in according flexible use authority to 2.5 GHz MMDS is worth quoting as it applies with equal validity to MDS 1 and 2:

> Building upon our prior decisions to expand the potential uses of this band, adding a mobile allocation to the band will provide additional near-term and long-term flexibility without forcibly displacing incumbent operators. Relying generally on market forces rather than making regulatory judgments about the best use of the band, a more flexible allocation would, for example, allow certain portable data applications to be provided under existing service rules (*i.e.*, not cause harmful interference to incumbent one-way and two-way fixed services) and could provide flexibility for introducing other advanced fixed and mobile applications in the future.

First Report and Order and Memorandum Opinion and Order, 16 F.C.C. Rcd. 17222, 17223, ¶ 2 (2001) (footnote omitted).

Clause (2)(B) requires a Commission finding that flexible use "would not deter investment in communications services and systems, or technology development...." If anything, DCT believes that granting this authority to MDS 1 and 2 will encourage equipment manufacturers to develop new and innovative equipment, including equipment that supports fixed, portable and mobile applications.

Finally, clause (2)(C) requires a Commission finding that flexible use "would not result in harmful interference among users." In DCT's opinion, this is the only portion of the Section 303(y) flexible use test that is significant if, as the Chairman so frequently urges, the Commission desires to move away from a "command and control" regulatory paradigm to a market-driven paradigm. At a theoretical level, the point-to-point subscriber station uses of this spectrum can coexist with portable uses of this spectrum. Essential to this conclusion is that this spectrum is licensed on an exclusive (unshared) basis. At a practical level, the "white paper" that is the central focus of the *Flexible Use Technical Implementation NPRM* shows that the addition of flexible

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[8] 47 U.S.C. § 303(y).

use authority without harmful interference among users is easily achieved. Clearly technical rules implementing such authority would be needed and those rules can be crafted in a manner that avoids this problem.[9]

IV. SPECTRAL HOMES FOR MDS 1 & 2

(a) A Decision on Relocation of MDS 1 Should Be Made Together with the Decision on the Relocation of MDS 2, Giving Due Regard for Their Interdependency

The decision to displace 5 of the 6 MHz assigned to MDS 1 clearly requires a rapid decision on what spectrum should be assigned to MDS 1. Although that one stranded MHz of MDS 1 bandwidth has not yet been displaced, it would be fanciful to believe it should remain where it is now, an isolated narrow band amid large pieces of spectrum subject to reallocation. Further, it would be poor spectrum policy to isolate such a narrow band and hence require possibly severe and spectrally inefficient limitations on adjacent band operations designed to protect this narrow band. Clearly, a rapid decision on the fate of this 1 MHz of spectrum is also is warranted in this stage of these proceedings; this decision should not be once again delayed to later stages in which options are fewer and the risk of reallocation by *fait accompli* greater.

But the decision to reallocate 5 MHz of the 6 MHz of MDS 1 has consequences for MDS that extend beyond this one stranded MHz of MDS 1 spectrum, as the fate of MDS 2 should not be viewed in isolation from MDS 1. As wireless cable channels, MDS 1 and 2 typically have been licensed with identical transmission characteristics and have been used for identical purposes.[10] After the MDS/MMDS/ITFS two-way rules were adopted in 1998, industry consensus assigned

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[9] Such rules could mirror the flexible use technical rules under consideration in the *Flexible Use Technical Implementation NPRM*.

[10] This interdependence is reflected in a high percentage of MDS 1 and 2 licenses in a market being held or used by one entity.

MDS 1 and 2 to return path use (subscriber-to-base).[11] With a change in the 2.5 GHz MMDS/ITFS band plan looming on the horizon, a plan created without much thought to MDS 1 and 2, this interdependence of MDS 1 and 2 can be expected to increase. The two-way use of MDS 1 and 2 for return path stations, or subscriber stations, paired with 2.5 GHz MMDS/ITFS will likely become obsolete with the adoption of any band plan resembling the industry-consensus model under consideration in the *Flexible Use Technical Implementation NPRM*. This model involves symmetrical allocations of 2.5 GHz MMDS and ITFS channels to up- and down-stream uses leaving only guardbands and "Mid-Band" frequencies probably needed for one-way instructional services. In short, each of MDS 1 and MDS 2 will be left without a pairing, unless they are paired together.

If the flexible use model should be applied to MDS 1 and 2, these circumstances require that any relocation of MDS 1 and 2 allow these channels mutually-supporting capabilities.

(b) A Decision on the Bands for Relocation of MDS 1 and 2 Should Be Made Based upon the Ability of Available Bands to Support Transmission Technologies

Accepting our premise that the MDS 1 and 2 allocations should be considered together as a pair, a first-tier issue is whether these channels can be relocated to spectrum that will support both time division duplex ("TDD") and frequency division duplex ("FDD") technologies and, if not both, which technology can be better accommodated in available relocation bands. A resolution of this issue should be guided by a consideration of the bands available, the bandwidths that must be accommodated and the impact on and caused by adjacent bands. In conducting this analyses, it is recognized that TDD systems can operate on either contiguous or

[11] *Third Notice of Proposed Rulemaking*, at 32 n.163. This industry consensus was memorialized in the "Breckinridge Agreement," which was signed by all of the major wireless cable operators, including American Telecasting, Inc., Heartland Wireless Communications, Inc. (now named

non-contiguous spectrum, but that FDD operation not only requires separate spectrum for the up- and the down-paths, but also an ample spectral separation between the up- and down- paths to avoid expensive duplexer filtering.[12]

(1) The Available Relocation Bands Are Not Adequate to Support a TDD Use of MDS 1 and 2

Contemporary spectrum allocation doctrine favors band selections, if possible, that allow MDS 1 and 2 systems to use either FDD or TDD,[13] and the *Third Notice of Proposed Rulemaking* at para. 68 contemplates such an allocation for MDS 1 and 2, if possible. As stated by the Commission's Spectrum Policy Task Force:

> "[t]he Commission should seek to avoid rules that restrict spectrum use to particular services or applications, so long as the user operates within the technical parameters applicable to the particular band in question. Further, these technical parameters should themselves be limited to those that are necessary to define the user's RF environment in terms of maximum allowable output and required tolerance of interference."[14]

Our review of the bands available for displaced MDS 1 and 2, however, reveals that the 12 MHz bandwidth allocated to MDS 1 and 2 simply cannot be relocated to any of the available bands in a manner that efficiently allows its use for TDD. For this reason, a FDD-supporting allocation is required.

This conclusion derives from a combination of a consideration of the size of the available bands and a consideration of adjacent band operations, and is shown below by a process of elimination:

Nucentrix), Wireless Holdings, Inc., BellSouth Wireless Cable, Inc., Peoples Choice TV, Inc., Wireless One, Inc. and CAI Wireless, Inc.

12 See note 20, *infra*.

13 This would enable operators to tailor the technology to the market, thus improving customer responsiveness and furthering competition. TDD systems are better suited for dense applications, such as campuses and city environments. FDD systems, by contrast, are more efficient in more rural environments.

14 Report, at 16-17 (Nov. 2002) (ET Docket No. 02-135).

(a) *The 2020-2025 MHz band* does not have a bandwidth sufficient to accommodate even one of these MDS channels, let alone two of them. It is a band 83% the size of a single MDS channel. Digital technology is sometimes mentioned as a means of expanding the effective capability of small amounts of spectrum, but this technology is of no help here as MDS already has digital authority. DCT notes that the industry "white paper" proposal for 2.5 GHz MMDS/ITFS includes a reduction in channel size from 6 MHz to 5.5 MHz. While the shrinkage of MDS 1 and 2 to this bandwidth may warrant further study, even a decision to so shrink MDS 1 and 2 would still leave each such channel too large for the 2020-2025 MHz band. Shrinking MDS 1 and 2 below 5.5 MHz in bandwidth would risk rendering those channels incapable of competing with other channels and would eliminate any economy in manufacture of subscriber units created by adding MDS 1 and 2 to 2.5 GHz MMDS/ITFS channels that would be possible if MDS 1 and 2 had at least the 5.5 MHz bandwidth proposed in the "white paper" for 2.5 GHz MMDS/ITFS.

So far, this discussion of the bandwidth limitation of the 2020-2025 MHz band has assumed that the full amount of its nominal 5 MHz band can be used for service. In fact, the useful portion of this band for TDD is much less, if it exists at all. This band is adjacent to the low power MSS uplink band at 2000-2020 MHz. The higher power base-to-subscriber time segment of a TDD transmission in the 2020-2025 MHz band could interfere with this MSS uplink band unless a portion of the 2020-2025 MHz were dedicated to a guardband. DCT has not calculated the size of this guardband, but comments by Cingular suggest that it could take the entire 5 MHz of bandwidth if prohibitively expensive filtering is to be avoided.[15] We believe that

[15] In comments in this proceeding filed in October of 2001, Cingular stated that 5 MHz guardbands would be needed to protect the PCS uplink band ending at 1910 from AWS operated in the TDD mode in the 1910-1930 MHz band. Comments of Cingular to Further Notice of Proposed Rulemaking (FCC 01-224, rel. Aug. 20, 2001), at 12-13.

in any case the guardband will need to be of such great size that the portion of this band remaining for a TDD system would be negligible at best.

(b) *The 1910-1920 MHz band* has the size to accommodate a single MDS channel, but not both MDS channels. Like the 2020-2025 MHz band, the TDD use of this band would significantly reduce the amount of working spectrum available because of adjacent band protection requirements. If used for TDD, the base-to-subscriber time portion of the TDD transmission would require guardbands on both sides of the band, as the spectrum below 1910 MHz is used for lower power PCS uplinks and the spectrum above 1920 MHz is used for very low power unlicensed PCS stations (e.g., wireless PBX systems). DCT is not in a position to suggest the size of these guardbands, but it should be recognized that they might have to be so large that they leave virtually no working spectrum.[16] The goal of spectrum efficiency is much better served by using the 1910-1920 MHz band for transmissions at lower powers more compatible with adjacent band operations.

(c) Use of *the 1990-2000 MHz band* for TDD would involve all the detriments found in the use of the 1910-1920 MHz band for TDD. The 1990-2000 MHz band has the nominal size (before assignment of spectrum to guardbands) to accommodate a single MDS channel, but not two MDS channels. If used for TDD, the lower power subscriber-to-base portion of the TDD transmission would require a guardband to protect it from the higher power PCS base station operations conducted in the lower adjacent band below 1990 MHz, and a guardband on its other side to protect lower power MMS uplinks from receiving interference from the higher power base-to-subscriber portion of the TDD transmission. DCT is not in a position to suggest the size of these guardbands, but it should be recognized that they might have to be so large that

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[16] See note 15, *supra*.

they leave virtually no working spectrum.[17] It almost goes without saying that, like the 1920-1930 MHz band, the 1990-2000 MHz band cannot accommodate both MDS 1 and 2.[18]

(d) This leaves *the 2165-2180 MHz band* as the remaining candidate to accommodate MDS 1 and 2 TDD operations.[19] This 15 MHz band has the nominal size required to accommodate both MDS 1 and 2. But, the TDD use of the band would again require the diversion of valuable spectrum at each end of the band to guardbands to protect or to gain protection from incompatible adjacent band operations. The size of these guardbands could consume so much of the spectrum that the amount of actual working spectrum is reduced beyond that which is feasible.

(2) Only a FDD Use of MDS 1 and 2 Can Be Supported in the Available Relocation Bands

For those reasons, as well as in recognition of how MDS 1 and 2 have been used and the trend in subscriber-based communications, DCT believes that pairing MDS 1 and 2 in two different bands separated sufficiently for FDD purposes is the best and only feasible option available. To provide a feasible FDD allocation, DCT believes that the spectral separation of MDS 1 from MDS 2 should be on the order of 30 MHz, so that both portable and fixed subscriber equipment may be inexpensively produced and priced competitively with other options a subscriber might choose.[20]

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[17] See note 15, *supra*.

[18] We do not mention the 1920-1930 MHz band because we fear that a portable MDS device operating in this band in an office environment where a UPCS wireless PBX system is used could disrupt, and could be disrupted by, that system. Comments of Avaya, at 10-11 (filed Nov. 8, 2001) (ET Docket No. 00-258).

[19] The 2155-2165 MHz band is proposed for new fixed and mobile use, including AWS, in paragraphs 68-69 of the *Third Notice of Proposed Rulemaking*.

[20] The need for spectral separation is acknowledged in the *Third Notice of Proposed Rulemaking*, page 21, n. 108. In its *Interim Report, Spectrum Study of the 2500-2690 MHz Band*, the staff recognized that FDD technologies "require a separation of at least 30 megahertz between upstream (customer to base) and downstream (base to customer) transmissions. For FDD

But, the spectrum available for that purpose is not just any of the bands identified in the *Third Notice of Proposed Rulemaking*. The two bands selected must be compatible with adjacent band uses, thus avoiding wasteful guardbands, and must have sufficient separation to avoid intra-system interference. Using a process of elimination, portions of the 1910-1920 and 1990-2000 MHz bands appear to be the only bands available as relocation bands that satisfy those needs.

(a) *The 2020-2025 MHz band*, with 5 MHz of bandwidth, can only accommodate 83% of a single MDS channel. As stated above, the spectrum-multiplying ability of digital cannot be used to effectively expand this bandwidth as MDS already has digital authority. Because this band is smaller than the 5.5 MHz bandwidth proposed for 2.5 GHz MMDS/ITFS (and much smaller when guardbands are added), the relocation of MDS to this band will sacrifice any economies in manufacture that would result if MDS 1 and 2 could be added to subscriber equipment used for 2.5 GHz MMDS/ITFS. While this band could be used as a MDS uplink channel, thereby making it more compatible in use with the lower adjacent MSS band beginning at 2020 MHz, some guardband probably would still be needed because MSS operating powers are not fixed and some guardband would be needed at the upper portion of this band to protect Part 74, Part 78 and Part 101 BAS, CARS and OFS operations above 2025 MHz. Although DCT is not in a position to calculate the size of these guardbands, DCT is confident that they would shrink the available working bandwidth well below its nominal 5 MHz size. Accordingly, the 2020-2025 MHz band appears too small and poorly situated among adjacent bands to effectively and efficiently accommodate a MDS channel.

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operation, this separation is necessary to provide sufficient isolation of upstream and downstream signals in the duplexer." *Interim Report, Spectrum Study of the 2500-2690 MHz Band*, ET Docket No 00-232, DA 00-258 at 54 (Nov. 15, 2000) (footnote omitted). While DCT believes that current technology permits a smaller separation, there is no doubt that a sizable separation is required.

(b) *The 1910-1920 MHz band* provides up to 10 MHz of bandwidth making it sufficient to accommodate a single MDS channel efficiently if used as MDS uplink spectrum. On the lower end it is bordered by the PCS uplink band and on the upper end it is bordered by the unlicensed PCS band. Accordingly, it can be used by MDS as uplink spectrum without a guardband from 1910-1916 MHz, thereby preserving MDS's present bandwidth. To the extent there is a perceived need for additional unlicensed PCS spectrum, the remainder of the band between 1916 and 1920 MHz could be made available for isochronous applications on an unlicensed basis, subject to non-interference with licensed uses of the spectrum below 1916 MHz.

(c) *The 1990-2000 MHz band* would complement the 1910-1916 by providing up to 10 MHz that is sufficient to accommodate a single MDS channel efficiently if used as MDS downlink spectrum. On the lower end it is bordered by the PCS downlink band and on the upper end it is bordered by MSS/ATC operations. If used for MDS downlinks, it could operate adjacent to the PCS downlink band without the need to strand spectrum in a protective guardband. Such use would accord with the Commission's expectation that any service using the 1990-2000 MHz band follow the same PCS "convention" for the band below 1990.[21] DCT suggests a 6 MHz allocation from 1990-1996 MHz, as it would equal the existing MDS bandwidth and the above-proposed MDS uplink bandwidth while avoiding guardbands.

(d) *The 2165-2180 MHz band* cannot accommodate both MDS channels operated in a FDD mode because they would need much more than the meager 3 MHz of spectral separation available within this band.[22] DCT also doubts that it makes sense to allocate a portion of this band to a single MDS channel for pairing with an uplink channel in the 1910-1916 MHz band or

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21 *Third Notice of Proposed Rulemaking* at 27 (¶ 51).

22 See note 20, *supra*.

a downlink channel in the 1990-1996 MHz band. The lower edge of the 2165-2180 MHz band is adjacent to a band proposed for AWS, TDD and FDD growth in the *Third Notice of Proposed Rulemaking*. If this proposal is implemented, any use by MDS of 2165-2180 MHz band would have to be separated from 2165 MHz by a guardband. Similarly, because of BAS, CARS and OFS use of the spectrum above 2180 MHz, a guardband would be needed just below that band as well.

V. THE 1910-1916/1990-1996 MHZ BANDS SHOULD BE ALLOCATED FOR MDS 1 AND 2 RELOCATION

The preceding discussion demonstrates that the only suitable bands available at this stage of these proceedings as relocation bands for MDS 1 and 2 are the 1910-1916/1990-1996 MHz bands. These bands offer the sole hope that MDS 1 and 2 can offer efficient, competitive and viable services into the future

There are potential competing uses for the 1910-1916/1990-1996 MHz bands, some real and defined, and others theoretical. None of those competing uses should enjoy priority over MDS 1 and 2 in access to those bands. It should be kept in mind that MDS 1 and 2 are being relocated to accommodate new or expanded services. A fair-minded spectrum policy must give MDS 1 and 2 preference over new uses of the bands. While there are other bands that may serve as relocation homes, as explained above, none of these identified bands can accommodate MDS 1 and 2 in a spectrally efficient fashion other than the 1910-1916/1990-1996 MHz bands.

Band sharing simply is not a viable alternative, as MDS 1 and 2 use a combination of omni-directional and directional transmissions that cannot be coordinated with other uses, especially if flexible use is envisioned.

Digital emissions also are not a substitute for the request bands, as MDS 1 and 2 already have digital authority or anticipate using the full band for digital operations.

VI. CONCLUSION

For the reasons stated above, MDS 1 and 2 should be allowed flexible use and should be relocated to 1910-1916 MHz band (uplink) and the 1990-1996 MHz band (downlink) on an exclusive basis. Other displacement bands identified in these proceedings are not suitable, and could destroy the potential of MDS Channels 1 and 2.

Respectfully submitted,

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