Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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
	)	
Amendment of the 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

REPLY COMMENTS OF AT&T WIRELESS SERVICES, INC.

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REPLY COMMENTS OF AT&T WIRELESS SERVICES, INC.

Pursuant to Section 1.415 of the Commission's rules,[1/] AT&T Wireless Services, Inc. ("AT&T Wireless") hereby submits its reply comments on the Commission's *Third Notice of Proposed Rulemaking* in the above-captioned proceeding.[2/]

[1/] 47 C.F.R. § 1.415 (2003).

[2/] *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, The Establishment of Policies and Service Rules for the Mobile-Satellite*

INTRODUCTION AND SUMMARY

AT&T Wireless agrees with the Commission and other commenters that many of the bands at issue in this proceeding should be reallocated to provide additional spectrum for advanced wireless services ("AWS"). It is crucial, however, that the ultimate band plan adopted by the Commission accommodate incumbent and anticipated licensees and promote the expeditious deployment of new services. AT&T Wireless, therefore, recommends that the Commission:

- Create a "G block" adjacent to the PCS band that would pair the 1910-1915 and 1990-1995 MHz bands and auction it for PCS subject to the Part 24 technical rules;
- Reject the creation of an H Block pairing the 1915-1920 and 1995-2000 MHz bands;
- Establish 1995-2000 MHz as a guard band to protect PCS services from MSS or MSS/ATC interference, and authorize only non-interfering uses of this band such as unlicensed PCS;
- Allocate the 2020-2025 MHz band for AWS, which could include services utilizing Time Division Duplex ("TDD") technologies, or allow certain Department of Defense ("DOD") operations to relocate into that spectrum;
- Use the 2155-2180 MHz spectrum to augment AWS downlink spectrum at 2110-2155 MHz, and create one asymmetrically paired block of 15x25 MHz and three blocks of 10x15 MHz; and
- Auction all spectrum reallocated for licensed commercial use.

(cont.)
Service in the 2 GHz Band, Amendment of the U.S. Table of Frequency Allocations to Designate the 2500-2520/2670-2690 MHz Frequency Bands for the Mobile-Satellite Service, Petition for Rule Making of the Wireless Information Networks Forum Concerning the Unlicensed Personal Communications Service, Petition for Rule Making of UTStarcom, Inc., Concerning the Unlicensed Personal Communications Service, ET Docket No. 00-258, IB Docket No. 99-81, RM-9911, RM-9498, RM-10024, *Third Report and Order, Third Notice of Proposed Rulemaking, and Second Memorandum Opinion and Order*, 18 FCC Rcd. 2223 (2003) ("*Third NPRM*" or "*Third Report and Order*").

I. THE COMMISSION SHOULD CREATE A G BLOCK FOR PCS AT 1910-1915 AND 1990-1995 MHZ, AND MAKE ADDITIONAL SPECTRUM AVAILABLE FOR UNLICENSED AND TDD USE

Like the Cellular Telecommunications & Internet Association ("CTIA"), Verizon Wireless, Motorola, and Ericsson, AT&T Wireless urges the Commission to create a G block that pairs 1910-1915 MHz with 1990-1995 MHz for terrestrial mobile service using the Part 24 PCS technical rules.[3/] Pairing the two 5 megahertz blocks and adopting the same technical rules applicable to the adjacent PCS band would allow existing commercial mobile radio services ("CMRS") carriers to combine these frequencies with their present spectrum holdings to increase capacity, expand or improve current services, or deploy next generation services.

Because current PCS 1900 MHz handsets are designed to meet out-of-band blocking requirements at a 20 megahertz offset from the PCS downlink band, narrowing the guard band by five megahertz through reallocation of the 1910-1915 MHz band has the potential to exacerbate interference problems and cause existing handsets to experience desensitization problems. As Motorola notes, however, advances in manufacturing and filtering performance should permit the development of PCS handsets that will operate in compliance with industry specifications with only a 15 megahertz duplex gap.[4/] CTIA similarly states that establishment of a G block could result in some degradation to PCS customers, but it agrees with Motorola that future generations of PCS handsets can be designed to minimize such problems. Although introduction of a G block is technically feasible and in the public interest, it is important that the Commission license this spectrum under the Part 24 PCS rules to ensure consistency in regulatory treatment and technical requirements.

[3/] CTIA Comments at 2; Ericsson Comments at 2-3; Motorola Comments at ii-iii, 2-7, 10-13; Verizon Wireless Comments at 5, n.10.

Under no circumstances, however, should the Commission create an "H block" or allow the use of the 1915-1920 MHz band for anything other than unlicensed PCS. Although, as discussed above, PCS systems should be able to operate with as little as a 15 megahertz offset between base and mobile transmit frequencies, leaving only a 10 megahertz separation is not technically feasible.[5/] No filter technology currently exists or is anticipated that would enable PCS handsets in the 1915-1920 MHz band to meet the generally accepted TIA standards for out-of-band emissions into the PCS base transmit band, and any out-of-band emissions limits adopted by the Commission aimed at mitigating the harmful interference would have to be so restrictive that the 1915-1920 MHz band would be unusable for CMRS or AWS.[6/] Thus, as CTIA and Verizon Wireless correctly assert, proposals to create an H block for PCS-like or other high-powered services should be rejected, and the 1915-1920 MHz band should remain allocated for unlicensed PCS uses.[7/]

In addition, to separate PCS base station transmit spectrum from MSS/ATC base station receive frequencies, the Commission should designate the 1995-2000 MHz band as a guard band between the two services.[8/] Consistent with this use, it should be possible to allow the operation of low-power non-interfering services such as unlicensed PCS.[9/] This would serve the dual purposes of ensuring that the effectiveness of the Commission's reallocation of spectrum is not undercut by interference problems and preventing under-use of valuable bandwidth.

(cont.)

4/ Motorola Comments at 4.

5/ CTIA Comments at 3-5; Verizon Wireless Comments at 5-6.

6/ CTIA Comments at 5.

7/ *See* Verizon Wireless Comments at 5-6; CTIA Comments at 2-3.

8/ *See* CTIA Comments at 5; Ericsson Comments at 3-4; Motorola Comments at iii, 10-13.

9/ *See* CTIA Comments at 5; Motorola Comments at 10-13.

Similarly, the Commission should exploit the opportunity presented by the availability of the unpaired spectrum at 2020-2025 MHz and designate that band either as a home for TDD technologies, for which TDD proponents have been assiduously searching,[10/] or as relocation spectrum for DOD operations from the 1710-1755 MHz band.[11/] As always, but particularly if TDD technologies are permitted in this band, the Commission should adopt technical rules adequate to prevent interference with adjacent services.[12/]

II. THE COMMISSION SHOULD ALLOCATE THE 2155-2180 MHZ BAND FOR FIXED AND MOBILE OPERATIONS AND USE IT TO AUGMENT AWS DOWNLINK SPECTRUM

This proceeding offers the Commission a unique opportunity to drive the development of innovative new services for mobile users. As consumers have started to demand increasingly bandwidth-hungry services such as streaming audio and various video services, it is becoming clear that additional downlink spectrum will be required.[13] Fortuitously, the spectrum under consideration here is perfectly situated to support this need. Specifically, the Commission should combine the 2155-2180 MHz band with spectrum already allocated for AWS base transmit at 2110-2155 MHz, and pair the resulting 70 megahertz with previously allocated mobile transmit AWS spectrum at 1710-1755 MHz.[14/] Asymmetrically pairing the 2110-2180

[10/] *See* ArrayComm Comments at 2, 4; CTIA Comments at 5-6; Motorola Comments at iv, 13-14.

[11/] Cingular Wireless Comments at 2-3, 9; CTIA Comments at 6; Verizon Wireless Comments at 8-9.

[12/] CTIA Comments at 6, n.10.

[13] As CTIA and Verizon Wireless assert, the use of base transmit paths is expected to be far more intensive than mobile transmit paths for new AWS data applications. CTIA Comments at 6; Verizon Wireless Comments at 7.

[14/] *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, *Second Report and Order*, 17 FCC Rcd. 23193, ¶ 1 (2002) ("*AWS Allocation Order*").

MHz band with the 1710-1755 MHz band will allow U.S. carriers to lead the world in the development of new applications and services for consumers, businesses, and government.

In addition, to ensure the proper balance of engineering efficiency and flexibility, the Commission should create a mix of larger and somewhat smaller blocks as follows: a 15x25 "I block" pairing 1710-1725 MHz with 2110-2135 MHz; and three contiguous 10x15 paired blocks (J-K) at 1725-1755 and 2135-2180 MHz. Adoption of this band plan would avoid unwieldy fragmentation and interleaving of the spectrum. Because the Commission has already concluded its comment rounds regarding the appropriate service rules for the 1710-1755 MHz and 2110-2155 MHz bands, that proceeding should be reopened to the extent necessary to address the asymmetrical pairing proposed here.[15/] AT&T Wireless continues to believe that the Part 24 service and technical rules should be applied to these bands to facilitate the most efficient and effective spectrum use possible.[16/]

III. REALLOCATED SPECTRUM SHOULD BE LICENSED VIA AUCTION

Unless spectrum is retained for unlicensed use or allocated for DOD relocation, all reallocated bands should be licensed via competitive bidding. The Commission should reject the attempts of multipoint distribution service ("MDS") licensees and Nextel to use this proceeding

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[15/] *Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands*, WT Docket No. 02-353, *Notice of Proposed Rulemaking*, 17 FCC Rcd. 24135 (2002) ("*1.7/2.1 GHz Service Rules NPRM*").

[16/] *1.7/2.1 GHz Service Rules NPRM*, AT&T Wireless Comments at 9-11 (filed Feb. 7, 2003) ("Since current CMRS carriers will almost certainly be the primary initial licensees in the AWS bands, and since the AWS spectrum will most likely be used to augment existing wireless offerings, applying the Part 24 Rules would promote the most efficient and rapid utilization of newly available spectrum . . . ."); *1.7/2.1 GHz Service Rules NPRM*, AT&T Wireless Reply Comments at 5-7 (filed Mar. 14 , 2003) ("[A]pplying the Commission's Part 24 PCS regulatory framework to the 1.7 and 2.1 GHz spectrum . . . would facilitate CMRS carriers' utilization of existing infrastructure, technologies, and expertise to provide both current and next generation services.").

to obtain an undeserved and anticompetitive spectrum windfall, as well as ICO's suggested revisitation of the Commission's decision to reallocate MSS spectrum.

Section 309(j) of the Communications Act demands the use of auctions when mutually exclusive applications are accepted for spectrum allocated for terrestrial wireless use unless the Commission determines that an auction would not be in the public interest.[17/] That case cannot be made here. Using auctions would facilitate the rapid deployment of services to consumers by allowing those companies that place the highest value on the spectrum to obtain the frequencies they deem necessary for existing and future operations, while providing them with the incentive to put the spectrum to use as expeditiously as possible.[18/]

Conversely, grant of requests by MDS licensees and Nextel to obtain certain spectrum bands essentially free of charge would undermine the Commission's licensing policies and devalue spectrum, thereby deterring investment by future bidders. To the extent that MDS licensees vacating the 2150-2160/62 MHz band are entitled to any replacement spectrum at all, such spectrum should be similar to that relinquished – contiguous, unpaired, and acceptable for one-way operations – not the paired bands that they now seek in order to provide two-way

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[17/] Section 309(j) of the Communications Act requires the auction of spectrum to be used to provide CMRS, except for very limited circumstances not relevant here or when such auction would not be in the public interest. *See* 47 U.S.C. §§ 301(j)(1), 309(j)(6)(E); *Implementation of Section 309(j) of the Communications Act -- Competitive Bidding*, PP Docket No. 93-253, *Third Report and Order*, 9 FCC Rcd. 2941, ¶¶ 4-6 (1994).

[18/] *See Principles for Promoting Efficient Use of Spectrum by Encouraging the Development of Secondary Markets, Policy Statement*, 15 FCC Rcd. 24178, ¶ 8 (2000) ("[T]he best way to realize the maximum benefits from the spectrum is to permit and promote the operation of market forces in determining how spectrum is used."); *see also Deployment of Wireline Services Offering Advanced Telecommunications Capability, et al.*, CC Docket Nos. 98-147, *et al.*, *Memorandum Opinion and Order, and Notice of Proposed Rulemaking*, 13 FCC Rcd. 24011, ¶ 2 (1988) (asserting that the Commission's role "is not to pick winners or losers, or select the 'best' technology to meet consumer demand, but rather to ensure that the marketplace is conducive to investment, innovation, and meeting the needs of consumers.").

services.[19/] Moreover, the MDS licensees appear to be confused between the concepts of "reallocation" and "relocation." Given that the Commission's policies require only that vacating licensees be provided with "comparable facilities," there is no reason to reallocate new bands for the companies currently holding authorizations at 2150-2160/62 MHz.[20/] Rather, it appears that more than sufficient spectrum exists in the 2500-2690 MHz band to permit the establishment of equivalent facilities for the 2150-2160/62 MHz licensees.[21/] Indeed, because the 2500-2690 MHz band already is allocated for MDS and ITFS use and is subject to a complete reconfiguration to accommodate two-way broadband communications,[22/] consolidating all MDS operations in that spectrum would be consistent with the MDS industry's repeated admonition not to "Balkanize MDS deployment into multiple bands that would vary from market to market, depriving the MDS industry of economies of scale in the design and manufacturing of equipment."[23/]

Similarly, Nextel's attempted spectrum grab – *i.e.*, proposing assignment of the 1910-1915 and 1990-1995 MHz bands to itself in conjunction with its plan for 800 MHz realignment –

[19/] Ad Hoc MDS Alliance Comments at 4-5 (asserting that the Commission should promptly designate the 1910-1920 and 1990-2000 MHz bands as the replacement spectrum for MDS Channels 1 and 2); Wireless Communications Association International ("WCA") Comments at i-ii, 12-16 (asserting that "the 1910-1916/1990-1996 MHz band is the only viable spectrum to which MDS channels 1 and 2/2A can be relocated" and that spectrum should be reallocated for MDS).

[20/] As the Commission has repeatedly stressed, "[g]iven advances in technology, *e.g.*, changing from analog to digital modulation and the flexibility provided by [the Commission's] existing relocation procedures . . . current MDS operations could be accommodated using substantially less spectrum than that of the existing 2150-2160/62 MHz allocation." *Third Report and Order*, ¶ 72.

[21/] *See 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, et al.*, WT Docket Nos. 02-66, RM-10586, *et al.*, *Notice of Proposed Rulemaking and Memorandum Opinion and Order*, FCC 03-56 (rel. Apr. 2, 2003) ("*MMDS/ITFS NPRM*").

[22/] *Id.*

[23/] *Cf* WCA Comments at 6 (citing WCA Comments at 52 (filed Feb. 22, 2001)).

should be rejected. As AT&T Wireless, Cingular, and others argued extensively in the 800 MHz Public Safety Proceeding and Cingular reiterates here, "the spectrum Nextel proposes to contribute at 700 and 900 MHz as part of its public safety proposal has nothing to do with solving interference problems and everything to do with creating a pretext to justify its self-serving claim to 10 MHz of spectrum in the 1.9 GHz band."[24/] The problems caused by Nextel's interference at 800 MHz are solvable without involving the spectrum being considered in this proceeding.

Finally, ICO's claims – also asserted in its pending petition for reconsideration of the *Third Report and Order* – that the Commission erred in reallocating the 1990-2000 MHz and 2165-2180 MHz bands should be summarily denied.[25/] The Commission has already considered and rejected all arguments raised by ICO and should do so again here.

[24/] Cingular Wireless Comments at 7.

[25/] *See* ICO Comments at 2, 6. AT&T Wireless agrees with ICO, however, that the 1995-2000 MHz band should not be reallocated to high-powered uses.

CONCLUSION

To ensure the most efficient use of the valuable spectrum at issue in this proceeding, the Commission should allocate the bands in accordance with the proposals set forth above.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I, Alexandria Jungkeit, hereby certify that on this 28th day of April, 2003, the foregoing Reply Comments of AT&T Wireless Services, Inc. were filed electronically on the FCC's Electronic Comment Filing System and copies were served via electronic mail to the following:

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