Before the

Federal Communications Commission

Washington, D.C. 20554

In the Matter of	)	
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	)	
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
	)	
Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for Use By the Mobile-Satellite Service.	)	ET Docket No. 95-18
	)	
The Establishment of Policies and Service Rules for the Mobile-Satellite Service in the 2 GHz Band.	)	ET Docket No. 99-81

To: The Commission

COMMENTS OF VERIZON WIRELESS

SUMMARY

Verizon Wireless hereby submits its comments on the July 23, 2002 report of the National Telecommunication and Information Administration ("NTIA") that assesses the potential for accommodating advanced wireless services in the 1710-1770 MHz and 2110-2170 MHz bands.[1] Verizon Wireless applauds the decision of NTIA and the U.S. Department of Commerce to make available additional spectrum over the next decade for commercial wireless services. The allocation of spectrum in the 1710-1755 MHz and

[1] NTIA, U.S. Department of Commerce, *An Assessment of the Viability of Accommodating Advanced Mobile Wireless (3G) Systems in the 1710-1770 MHz and 2110-2170 MHz Bands*, ("NTIA Report"), (rel. Jul. 23, 2002) available at http://www.ntia.doc.gov/ntiahome/threeg/va7222002/3Gva072202web.htm.

2110-2170 MHz bands is an important step in achieving the Commission's goal of developing a comprehensive spectrum management plan that will facilitate the continued development of advanced wireless services and promote the long-term growth of the wireless industry.[2]

The Administration's decision to make available spectrum in the 1710-1755 MHz and 2110-2170 MHz bands is also extremely important because it is consistent with fundamental principles of sound spectrum management advocated by the wireless industry.[3] First, it will promote the harmonization of spectrum allocations worldwide. The 1710-1850 MHz and 2110-2200 MHz bands have both been identified worldwide for Third Generation ("3G") and other advanced wireless services. The decision to make portions of these spectrum bands available for use in the United States will ensure that U.S. consumers enjoy the same advanced wireless services and resulting economies of scale that consumers enjoy worldwide. Second, the Administration's commitment to make this spectrum available no later than 2008 will ensure that additional spectrum is available in time to meet the needs of the marketplace. Finally, the substantial clearing of incumbent systems from the 1710-1755 MHz and 2110-2170 MHz bands will ensure that the spectrum made available for advanced wireless services is actually usable without the

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[2] *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*, Notice of Proposed Rulemaking and Order ("Notice"), FCC 00-455 (rel. Jan 5, 2001); *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,* Memorandum Opinion and Order and Further Notice of Proposed Rulemaking and Order ("Further Notice"), FCC 01-224, (rel. Aug. 20, 2001).

[3] *See* Joint Comments of the Cellular Telecommunications & Internet Association, the Telecommunications Industry Association, and the Personal Communications Industry Association (filed Feb. 22, 2001), in response to Notice ("Industry Comments") at 3-4.

threat of harmful interference that would severely undermine the provision of service to the public. Verizon Wireless urges the Commission to implement the NTIA plan in a manner consistent with these principles as outlined herein.

I. THE COMMISSION SHOULD ALLOCATE CONTIGUOUS SPECTRUM FOR ADVANCED WIRELESS SERVICES.

The NTIA Report indicates that 45 MHz of spectrum from the 2110-2170 MHz band should be made available and paired with spectrum in the 1710-1755 MHz band.[4] It also indicates that the FCC's 3G working group has determined that "45 MHz in the 2110-2170 MHz band appears to be feasible for 3G use," though it does not specify what 45 MHz within that band would be made available.[5]

Verizon Wireless urges the Commission to reallocate 2110-2155 MHz and pair it with spectrum at 1710-1755 MHz. As has been demonstrated in the record, wireless operators require large blocks of contiguous spectrum to economically deploy advanced wireless services.[6] This is required to facilitate the deployment of wideband technologies that are necessary to deliver high-speed data and other broadband wireless services. Moreover, contiguous spectrum is necessary to avoid the harmful interference that would

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[4] NTIA Report at 1.

[5] Id at 3.

[6] *See* Comments of AT&T Wireless Services, Inc. (filed Oct. 22, 2001), in response to Further Notice ("AT&T Further Comments") at 3; *see also* Comments of the Wireless Communications Division of the Telecommunications Industry Association (filed Oct. 22, 2001), in response to Further Notice ("TIA Further Comments") at 4; *see also* Reply Comments of AT&T Wireless Services, Inc., (filed Mar. 9, 2001), in response to Notice ("AT&T Reply Comments") at 8; *see also* Comments of the Telecommunications Industry Association (filed Feb. 22, 2001), in response to the Notice ("TIA Comments"), at 14-15; *see also* Comments of Ericsson (filed Feb. 22, 2001), in response to Notice ("Ericsson Comments") at 13; *see also* Comments of Lucent Technologies, Inc. (filed Feb. 22, 2001), in response to Notice ("Lucent Comments") at 7.

occur by operating advanced wireless systems adjacent to other disparate systems and to make the most efficient use of spectrum resources.[7]

The reallocation of 2110-2155 MHz and its pairing with 1710-1755 MHz would also promote greater spectrum harmonization and the potential for making additional spectrum available for advanced wireless services in the future. There is substantial evidence in the record to justify the allocation of more than 90 MHz of additional spectrum for advanced wireless services over the longer term.[8] The NTIA Report acknowledges this need for additional spectrum,[9] and the Secretary of Commerce has directed NTIA to continue working closely with the Commission "to make more spectrum available by the end of the decade to meet the wireless voice and data communications needs of American consumers beyond 2010."[10] The future allocation of 2155-2170 MHz and its pairing with 1755-1770 MHz, to the extent it could be made available, would provide an ideal supplement to the 90 MHz of spectrum that is being recommended for reallocation now. However, such an allocation would not be possible if

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[7] Further Notice at ¶ 38; as discussed infra, the continued operations of MDS systems within spectrum otherwise used for 3G mobile systems would result in large portions of the band being unavailable for use and thus would not promote the most efficient use of spectrum.

[8] *See* Reply Comments of Verizon Wireless (filed Mar. 9, 2001), in response to Notice ("Verizon Wireless Reply Comments") at 10; *see also* Comments of Cingular Wireless LLC (filed Feb. 22, 2001), in response to Notice ("Cingular Comments") at 8; *see also* Comments of AT&T Wireless Services, Inc. (filed Feb. 22, 2001), in response to Notice ("AT&T Comments") at 3.

[9] NTIA Report at 4.

[10] United States Department of Commerce News, *Bush Administration Forges Landmark Plan for Spectrum Allocation*, ("Commerce News Release"), (rel. Jul. 23, 2002) at 1, available at http://www.ntia.doc.gov/ntiahome/press/2002/va7232002.htm.

the Commission were to adopt a non-contiguous band plan for 2110-2170 MHz, for example, by pairing 1710-1755 MHz with 2110-2150/2160-2165 MHz.[11]

Verizon Wireless is encouraged by the NTIA Report which suggests that the 1755-1770 MHz band, currently used by the U.S. Department of Defense ("DOD"), might be available for reallocation in the future if improvements in technology permit more extensive sharing of the band or if the availability of alternate spectrum allows DOD to relocate.[12] With regard to alternate spectrum, NTIA proposes that the 2025-2110 MHz band be made available to support DOD space operations, noting that the relocation of satellite control frequencies from the 1755-1850 MHz band would make more spectrum available for other DOD uses.[13] The wireless industry has previously noted the benefits of making the 2025-2110 MHz band available for DOD space operations.[14] Such an allocation would be consistent with worldwide use of the band for space operations, and as the industry originally proposed, could help to facilitate the clearing of spectrum in the 1755-1850 MHz band for commercial use. While it is not yet clear whether the spectrum made available above 1755 MHz through the relocation of DOD space operations to 2025-2110 MHz would be needed for other DOD uses or could be made available for commercial services, Verizon Wireless believes that making the 2025-2110 MHz band available for DOD space operations now is in the public interest.

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[11] Notice at ¶ 52.

[12] NTIA Report at 3.

[13] *Id.*

[14] Industry Comments, *Report of the Industry Association Group on Identification of Spectrum for 3G Services*, at 5.

II. THE COMMISSION SHOULD RELOCATE ALL MDS OPERATIONS AT 2150-2162 MHz TO SPECTRUM OUTSIDE THE 2.1 GHz BAND.

In its initial Notice, the Commission proposed that 45 MHz of spectrum be made available for advanced wireless service in the 2110-2150 MHz and 2160-2165 MHz bands.[15] The 2150-2160 MHz band was not originally proposed for reallocation due to the operations of Multipoint Distribution Service ("MDS") systems in the band.[16] As Verizon Wireless and others have previously noted, it is vitally important that the Commission allocate contiguous spectrum for advanced wireless services and clear all MDS operations from the 2.1 GHz band.[17] The use of the band for 3G and other advanced wireless services would be significantly hindered by the continued operation of MDS at 2150-2160 MHz due to the harmful interference that would be caused by MDS transmitters to 3G handsets. This potential for interference could be reduced through the adoption of more stringent out-of-band emissions limits for MDS and the establishment of sufficient guard bands to separate MDS from 3G operations. However, this would result in substantially less spectrum being available for advanced wireless services.[18]

Verizon Wireless is encouraged by the conclusions reached in the NTIA Report regarding the potential for clearing the 2110-2170 MHz band. The Report asserts, "that all of the existing non-MDS operations in the 2110-2150 MHz and 2160/2162-2200 MHz bands can be accommodated" utilizing alternate spectrum in the 4 GHz, 6 GHz, 10 GHz,

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[15] Notice at ¶ 52.

[16] The Commission did seek comment on the allocation of 2150-2160 MHz for advanced wireless services and the relocation of MDS systems to alternate spectrum in its Further Notice; Further Notice at ¶ 38.

[17] Verizon Wireless Reply Comments at 13-14 and at Appendix; *see also* Reply Comments of Motorola, Inc. (filed Mar. 9, 2001), in response to Notice ("Motorola Reply Comments"), at 11 and at Appendix.

[18] Verizon Wireless Reply Comments at 13-14.

and 11 GHz bands. With regard to the relocation of MDS operations at 2150-2160 MHz, the Report concludes that there are "several viable alternatives for relocation spectrum, and as such, adequacy of relocation spectrum should not present an insurmountable challenge."[19] Verizon Wireless urges the Commission to take appropriate actions to clear the 2110-2170 MHz bands of all existing systems, including MDS, in a manner that ensures the availability of the spectrum in a timeframe that meets the needs of the marketplace and is consistent with the clearing of the 1710-1755 MHz band.

III. THE COMMISSION SHOULD ENSURE THE EFFICIENT RELOCATION OF FEDERAL SYSTEMS OUT OF THE 1710-1755 MHz BAND.

Verizon Wireless concurs with NTIA's finding that sharing spectrum between incumbent Federal systems and 3G systems in the 1710-1755 MHz band would not be possible if both systems operated on the same frequency, in the same geographic area, at the same time.[20] We have contended from the outset of the NTIA study that the nationwide deployment of 3G and other advanced wireless services requires that the entire 1710-1755 MHz band be cleared of Federal systems, including those systems previously "grandfathered" by NTIA.[21] Verizon Wireless participated in detailed technical discussions with representatives from NTIA and DOD to assess the potential for geographic sharing by examining the potential for interference to 3G systems from continued operation of DOD systems in the 16 "protected areas."[22] We concluded that

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[19] NTIA Report at 16.

[20] Id at 12.

[21] These "grandfathered" systems include fixed systems used by Federal Power Agencies and for safety-of-life services as well as fixed, aeronautical mobile, and tactical radio relay systems operated by DOD in 16 "protected areas."

[22] NTIA Report at Appendix.

the continued operation of these systems would preclude 3G deployment in large portions of the United States – making geographic sharing of the band an undesirable alternative.

NTIA's decision to substantially clear the 1710-1755 MHz band is significant because it will ensure that advanced wireless services will be available to all U.S. consumers. We believe that the continued operations of DOD tactical radio relay systems in Yuma, Arizona and Cherry Point, North Carolina, as proposed in the NTIA Report, will not have a significant effect on the nationwide deployment of such services. However, we urge the Commission to continue working with NTIA and DOD to explore any means possible for making this spectrum available for commercial use in those areas while protecting DOD's required uses of the band.

The NTIA Report recommends that DOD be permitted to operate tactical radio relay systems in the other 14 "protected areas" on a secondary, coordinated basis.[23] To the extent that these systems cannot adjust their operations to prevent interference to commercial users, they would be required to relocate. Verizon Wireless supports the general concept that DOD should not be required to relocate their systems if they do not cause harmful interference to advanced wireless services. However, based on our own analysis and the extensive record developed by NTIA, we believe that it is highly likely that such interference would occur unless the commercial operator decides not to deploy services in those areas. While deployment in more remote areas may occur at a later date, we believe that deployment will occur in all these areas over the long-term. Consequently, NTIA and DOD should anticipate that most, if not all, DOD systems operating within these 14 "protected areas" would need to relocate to alternate bands.

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[23] Id at 2.

As discussed infra, the efficient relocation of DOD systems and the reimbursement of related costs to DOD may dictate that these systems be scheduled for relocation in advance rather than waiting to determine if they can be operated on a secondary basis.

Verizon Wireless has previously noted that it would be more efficient, and more expeditious, if the reimbursements paid to Federal agencies for relocation related expenses were paid through the proceeds of any auction used to reassign the spectrum.[24] The establishment of such a process would substantially reduce post-auction transaction costs, provide greater certainty to commercial operators regarding the cost and timing of relocations, and give Federal agencies greater control over the relocation process. We commend, therefore, the Administration for proposing legislation that would codify such a process.[25] The establishment of a Spectrum Relocation Fund, like the one proposed by the Administration, will clear the spectrum in the most efficient and cost effective manner possible while ensuring that Federal agencies are fully compensated for relocation related expenses.[26] Verizon Wireless believes that there is considerable support in Congress for the establishment of such a fund, though it is not yet clear when, or even if, enabling

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[24] Verizon Reply Comments at 15.

[25] U.S. Department of Commerce, *Letter from Theodore W. Kassinger, General Counsel, to The Honorable Richard B. Cheney, President of the Senate, Regarding a Draft Bill to Amend the Communications Act of 1934 to Create a Spectrum Relocation Fund* ("Relocation Fund Transmittal Letter"), (sent Jul. 23, 2002), available at http://www.ntia.doc.gov/ntiahome/congress/2002/legistransmittal7232002.htm.

[26] A Spectrum Relocation Fund would pay Federal agencies in advance for relocation-related expenses using the proceeds from the auction of licenses in the 1710-1755 MHz band. The proposed legislation calls for NTIA to provide the FCC with a cost estimate and schedule for the relocations in advance of the auction. This provision is important because it establishes the reserve price for the auction and provides necessary information to prospective bidders about the timing of the relocations. It is not clear, however, how this process would apply to systems that continue to operate on a secondary basis – i.e., systems that may or may not be relocated depending on whether they cause harmful interference.

legislation will be passed. However, we urge the Commission not to prematurely adopt spectrum-clearing rules until it has given Congress sufficient time to adequately consider this important legislation.

CONCLUSION

Verizon Wireless believes that the NTIA plan is an important step in addressing the long-term spectrum needs of the wireless industry and ensuring that consumers will continue to enjoy the many benefits of wireless voice and data services. We urge the Commission to implement the NTIA plan in a manner that promotes the most efficient and effective use of this valuable public resource.

Respectfully submitted,

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Dated: August 8, 2002

Certificate of Service

I hereby certify that on this 8th day of August copies of the foregoing "Comments of Verizon Wireless" in ET Docket No. 00-258 were sent by hand delivery or U.S. mail to the following parties:

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