

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

In the Matter of	)	
	)	
Relocation of the 216-220 MHz	)	ET Docket No. 00-221
1390-1395 MHz, 1427-1429 MHz	)	RM-9267
1429-1432 MHz, 1432-1435 MHz	)	RM-9692
1670-1675 MHz, and 2385-2390 MHz	)	RM-9797
Government Transfer Bands	)	RM-9854

**COMMENTS OF MOTOROLA, INC.**

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Date: March 8, 2000

## Table of Contents

Summary .....	i
I. Background .....	2
II. The Commission Should Allocate 1.4 GHz Spectrum For the Land Mobile Communications Service.....	3
III. Coordination of Shared Bands Should Be Expeditious as Practical.....	6
IV. Relocation Policies and Costs Must Clearly Be Defined for Government Incumbents Prior to Competitive Bidding. ....	7
IV. Conclusion .....	11

## **Summary**

Motorola strongly supports the Commission's efforts to dedicate additional spectrum for use for private land mobile services. With the severe congestion of the existing private spectrum bands, allocation of an additional ten megahertz of spectrum will greatly aid efforts to accommodate the critical needs of this industry.

Motorola urges the Commission to adopt its proposals for the 1.4 GHz band to create a new allocation for the Land Mobile Communications Service ("LMCS"). Motorola supports the Commission proposal to pair the 1390 to 1392 MHz band with the 1427 to 1429 band for site-specific licensing along with pairing six megahertz of spectrum at 1392 to 1395 MHz and 1432 to 1435 MHz for competitive bidding to band managers. Finally, Motorola believes the Commission should make every effort to ensure that relocation costs and procedures are clearly defined prior to any competitive bidding activities and suggests the use of auction revenues to reimburse relocated Government users.

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**COMMENTS OF MOTOROLA, INC.**

Motorola, Inc. (“Motorola”) hereby respectfully submits its comments in response to the Federal Communications Commission’s *Notice of Proposed Rule Making* (“27 MHz NPRM”) in the above-referenced matter.<sup>1</sup> Motorola urges the Commission to adopt its proposals for the 1.4 GHz band to create a new allocation for the Land Mobile Communications Service (“LMCS”). Specifically, Motorola supports the Commission option to pair the 1390 to 1392 MHz band with the 1427 to 1429 band for site-specific licensing along with pairing six megahertz of spectrum at 1392 to 1395 MHz and 1432 to 1435 MHz for competitive bidding. Additionally, Motorola asks that the Commission utilize a band manager licensing framework for the spectrum subject to auction. Finally, Motorola believes the Commission should make every effort to ensure that relocation costs and procedures are clearly defined prior to any competitive bidding activities.

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<sup>1</sup> See Reallocation of the 216-220, 1390-1395 MHz, 1427-1429 MHz, 1429-1432 MHz, 1432-1435 MHz, 1670-1675 MHz, and 2385-2390 MHz Government Transfer Bands, *Notice of Proposed Rule Making*, ET Docket No. 00-221 (rel. Nov. 20, 2000) (“27 MHz NPRM”).

## I. Background

In the past year and half, the Commission has actively worked to define its overall spectrum management policies. As part of this effort, the Commission issued a *Policy Statement* outlining a spectrum management plan for the new millennium and addressing the increasing need to manage spectrum efficiently in order to foster the development of a competitive communications marketplace.<sup>2</sup> In the *Policy Statement*, the Commission noted that there existed a great deal of congestion in the private land mobile service bands and suggested the creation of a Land Mobile Communications Service (“LMCS”).<sup>3</sup> As promised in the *Policy Statement*, the Commission released the *27 MHz NPRM* which addresses, in particular, the allocation of spectrum at 1.4 GHz.<sup>4</sup> The *27 MHz NPRM* asserts that the 1432 to 1435 MHz band must be allocated through the use of competitive bidding and proposes to pair an additional three MHz of spectrum at 1392 to 1395 MHz for paired or two-way operations.<sup>5</sup> Further, the *27 MHz NPRM* includes as a first option a proposal to pair the 1390 to 1392 MHz band with the 1427 to 1429 MHz band for traditional site licensing.<sup>6</sup>

Additionally, the *27 MHz NPRM* discusses the implementation of the Strom Thurmond National Defense Authorization Act for Fiscal Year 1999 (“NDAA-99”) which greatly changed

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<sup>2</sup> See Principles for Reallocation of Spectrum to Encourage the Development of Telecommunications Technologies for the New Millennium, *Policy Statement*, 14 FCC Rcd 19868 (rel. Nov. 22, 1999) (“*Policy Statement*”).

<sup>3</sup> *Id.* at ¶ 24.

<sup>4</sup> The spectrum at 1.4 GHz is collectively comprised of the following frequency bands: 1390 to 1395 MHz, 1427 to 1429 MHz, 1429 to 1432 MHz, and 1432 to 1435 MHz.

<sup>5</sup> See *27 MHz NPRM* at ¶¶ 30-31.

<sup>6</sup> *Id.*

the relocation policies for Federal spectrum.<sup>7</sup> Moreover, the Commission requested comment on protection of Government operations, including proposals concerning prior coordination of new systems prior to use in particular coordination zones. *The 27 MHz NPRM* also sought comment on the Commission's proposed relocation procedures with NTIA and inquired whether there were additional steps it could take to develop relocation policies that are transparent, efficient, and fair.<sup>8</sup>

## **II. The Commission Should Allocate 1.4 GHz Spectrum For the Land Mobile Communications Service.**

As recognized in the *Spectrum Policy Statement*, there is a rapidly growing need for additional land mobile service spectrum. In recognition of the expanding congestion in the private land mobile spectrum bands, Motorola agrees with the Commission's determination to create a new Land Mobile Communications Service. In particular, Motorola agrees with the Commission proposal to pair the 1432 to 1435 MHz band with an additional three megahertz of spectrum.<sup>9</sup> Specifically, Motorola supports pairing the 1432 to 1435 MHz and 1392 to 1395 MHz bands for the provision of land mobile communications service. Pairing this spectrum would enable use of frequency division duplex technology currently deployed by private land

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<sup>7</sup> See NDAA, Pub. L. 105-261, 112 Stat. 1920 § 1064(c)(3) (codified at 47 U.S.C. § 923(c)(3)(B))("NDAA-99").

<sup>8</sup> See *27 MHz NPRM* at ¶ 57.

<sup>9</sup> *Id.* at ¶ 36.

mobile radio systems. Notably, all three of the Commission's 1.4 GHz allocation proposals pair these frequency bands and suggest competitive bidding as the licensing mechanism.<sup>10</sup>

In addition to pairing the 1432 to 1435 MHz and 1392 to 1395 MHz bands, the Commission should adopt band manager licensing of this paired spectrum. By licensing this spectrum to band managers, the Commission will enable efficient use of this spectrum and will best serve the needs of the land mobile community and its users. Such a result is clearly in keeping with the Commission's policy goals, including increased flexibility of spectrum use and the development of a "free market" in spectrum.<sup>11</sup> The band manager framework promotes flexibility by allowing third parties to efficiently manage particular spectrum bands, making spectrum readily accessible to potential end users in amounts that suit their individual needs.

In addition to providing flexibility and efficient spectrum use, band managers are particularly well equipped to handle the 1.4 GHz band. As the Commission notes in the *27 MHz NPRM*, there is a considerable amount of Government use of the 1.4 GHz spectrum.<sup>12</sup> As part of its function as a spectrum management organization, a band manager will be ideally suited to deal with the inherent difficulties associated with relocating or otherwise accommodating existing Federal government incumbents.

Finally, a band manager will bring market forces to bear upon spectrum use and thus foster the development of a secondary market in land mobile radio spectrum. Through market-

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<sup>10</sup> *Id.* at ¶¶ 31-33.

<sup>11</sup> *See* In the Matter of Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules, *Second Report and Order*, 15 FCC Rcd 5299 at ¶¶ 26-32 (rel. Mar. 9, 2000) ("700 MHz 2<sup>nd</sup> R&O").

<sup>12</sup> *See 27 MHz NPRM* at ¶¶ 20-23.

based transactions, potential users can acquire spectrum tailored to meet the unique and changing demands of the marketplace, such as the need for spectrum on a short-term basis or in a particular geographic area. Motorola believes that allocation of 1.4 GHz spectrum through a band manager licensing mechanism will relieve congestion in existing land mobile frequencies and optimize the use of available spectrum.

Motorola also supports the Commission's Option 1 proposal to pair 1390 to 1392 MHz with 1427 to 1429 MHz to provide a total of four MHz for frequency coordinated, site-specific licensing customarily employed by PMRS. Allocating this spectrum for traditional site-specific licensing will permit the efficient allocation to private land mobile licensees whom, for whatever reason, cannot or will not be able to lease spectrum from a band manager. Additionally, it provides for the shared use of spectrum in an effective, efficient manner for those entities that do not require an exclusive allocation for their particular service needs.

Although supportive of the allocation of 1.4 GHz spectrum to the LMCS, Motorola is concerned that the majority of the 1.4 GHz band is not available until 2006. The only portion of the band that is available in 2002 is 1432 to 1435 MHz. The 1392 to 1395 MHz band, which the Commission proposes to pair with the 1432 to 1435 MHz, is held in reserve until 2006. All four MHz of spectrum proposed for site-specific licensing is held in reserve until 2006. If the entire 1.4 GHz band is not made available for LMCS use simultaneously, there will be a considerable delay in the deployment of much-needed private land mobile spectrum. Moreover, if potential bidders realize that access to half of the spectrum will be delayed for four years, auction

participation will most likely be hampered. Motorola urges the Commission to take whatever steps necessary to ensure that the ten megahertz of LMCS spectrum is made available in 2002.

### **III. Coordination of Shared Bands Should Be Expeditious as Practical.**

The *27 MHz NPRM* proposes several methods of conducting coordination in spectrum bands shared between Government and non-Government users.<sup>13</sup> Motorola urges the Commission to adopt an appropriate mechanism for coordination that carefully considers the specific operations in each shared band, the overall amount of sharing, and minimizes the amount of coordination necessary. Interference protection rights for both Government and non-Government facilities should be precisely defined in terms of technical parameters and operating requirements. General rules that provide technical limits to prevent interference are desirable, with additional sharing permissible through further coordination between all affected parties. In particular instances where coordination is necessary, such rules should be established to limit the time to respond to coordination requests. Otherwise, both Government and non-Government entities seeking to initiate operations could potentially face unnecessary delays.

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<sup>13</sup> *Id.* at ¶¶ 51-53.

#### **IV. Relocation Policies and Costs Must Clearly Be Defined for Government Incumbents Prior to Competitive Bidding.**

In addition to protection in shared bands, the *27 MHz NPRM* also discusses relocation in accordance with NDAA-99 for Government facilities. The NDAA-99 requires mandatory rather than permissive reimbursement of Government spectrum users in spectrum identified for transfer in response to the Balanced Budget Act of 1997 (“BBA-97”),<sup>14</sup> the 1710 to 1755 MHz band, and Government spectrum users when future auctions lead to the relocation of a Government station. The Commission notes that NTIA has proposed relocation procedures for Government systems governed by NDAA-99<sup>15</sup> and proposes a process that would require the NTIA to provide relevant information for unclassified Government facilities, including total cost of relocation, in advance of the relevant auction. For classified government facilities, NTIA would provide more general information focusing solely on the total cost of relocating classified systems from a particular spectrum block and market. Interested bidders would then be able to factor this relocation information into their bidding strategies.<sup>16</sup>

As described in more detail below, Motorola strongly supports the Commission proposal to clearly specify relocation costs before any auction of reallocated Government spectrum subject to mandatory reimbursement. Clearly identifying costs prior to the auction, rather than allowing those costs to be determined through post-auction negotiations, will eliminate uncertainty

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<sup>14</sup> See Pub. L. 105-33, 111 Stat. 251 (1997).

<sup>15</sup> See Mandatory Reimbursement Rules for Frequency Band or Geographic Relocation of Federal Spectrum-Dependent Systems, *Notice of Proposed Rulemaking*, 66 Fed. Reg. 4771 (proposed Jan. 18, 2001).

<sup>16</sup> See *27 MHz NPRM* at ¶¶ 57-63.

regarding the true acquisition cost of the spectrum and will benefit new licensees, the incumbents, and provide for the rapid deployment of services.

**A. Government Facilities Present Novel Relocation Issues**

The relocation policies and procedures promulgated by the Commission to relocate incumbent non-Government users have generally been successful.<sup>17</sup> However, Government use of spectrum is inherently different than non-Government use and requires a different framework to be successful. Government facilities have radio systems that are often vastly different than non-Government networks, particularly with respect to classified systems. As such, non-Government users of the spectrum have limited, if any, expertise with such systems and face difficulty in ascertaining relocation costs for Government equipment. It is therefore extremely difficult for a non-Government auction winner to negotiate in a meaningful way with Government users to determine relocation costs after an auction. The Office of Management and Budget (“OMB”) and NTIA, working in conjunction with the Commission, may be best positioned to work with Government users to accurately determine the relocation costs prior to an auction. Such a determination of the reasonable value of the Government facilities to be relocated will provide certainty to the displaced Government user that its relocation costs will be reimbursed while also allowing potential non-Government licensees to factor in the appropriate relocation costs that must be borne. All this critical information should be supplied to bidders pre-auction to ensure the proper functioning of the competitive bidding system.

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<sup>17</sup> See e.g., Amendment of the Commission’s Rules Regarding a Plan for Sharing the Costs of Microwave Relocation, WT Docket No. 95-157, *First Report and Order and Further Notice of Proposed Rule Making*, 11 FCC Rcd 8825 (1996).

**B. Determination of Relocation Expenses Prior to an Auction Is Consistent With The Communications Act.**

Because Government systems required to relocate will receive mandatory reimbursement from auction participants, it is logical and certainly in the public interest to enumerate clearly such costs prior to any license auction. In fact, the Communications Act requires the Commission to ensure an adequate period is allowed for interested parties to develop business plans, assess market conditions, and evaluate the availability of equipment for the relevant services.<sup>18</sup> Undoubtedly business plans, market conditions and even equipment availability are affected by relocation costs and policies. With certain guidance on relocation requirements prior to an auction, interested parties will be able to fully develop and understand each of these issues before auction participation, in keeping with the requirements of the Communications Act, and accurately factor in relocation costs when bidding.

**C. To Ensure Expedient Government Relocation, Reimbursement Should Come Directly From Auction Revenues.**

Another crucial component needed to create a fair and efficient competitive bidding system is expedient relocation of incumbents post-auction. The best method to achieve this goal is the use of auction revenues to directly compensate Government users. Monies from the auction, sufficient to cover the full costs of relocation would go directly to the affected Government entity post-auction. Such a relocation mechanism has several advantages for both Government and non-Government users. First, while the NDAA-99 provides for compensation,

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<sup>18</sup> See § 309(j)(2)(E) of the Communications Act of 1934, as amended.

it does so subject to authorization and appropriation Acts.<sup>19</sup> This mechanism has the potential to add unnecessary uncertainty and delay with respect to relocation of Federal entities. Efficient and complete compensation of Federal entities could be better facilitated if monies from prospective auctions of reallocated spectrum were used to directly compensate any Federal entity affected by the reallocation. This will help speed implementation of new services in an efficient and effective manner and will give the Federal entities more control over the deployment of new systems. Second, with a level of certainty concerning relocation costs, the relocation process will be expedited. This in turn will enable new entrants faster access to encumbered spectrum. Finally, in keeping with the stated goals of the Commission, greater certainty on the availability of spectrum and relocation costs will create more transparent, efficient, and fair auctions.

Motorola recognizes that using auction revenues to compensate directly Government users for relocation will require legislative action and that it may take some time to enact. Motorola fully intends to work with Congress, the FCC and NTIA on these issues during the next few months to create a suitable framework for Government relocation reimbursement. Absent such preferred legislation affecting Government reimbursement procedures, there still must be a method that effectively and directly compensates relocated Government users. Only if relocation costs are supplied pre-auction can a prospective bidder factor these costs into its bidding strategy. With such costs included in the bidding and business plan of the new entrant, compensation will flow to the affected Government user post-auction in a fast, efficient manner. Therefore, Motorola strongly urges the Commission to adopt its proposal to gather Government relocation costs pre-auction to support the effective auctioning of reallocated spectrum.

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<sup>19</sup> See Section 113 (g)(C) of the NTIA Organization Act.

#### **IV. Conclusion**

Motorola strongly supports the allocation of additional spectrum at 1.4 GHz for land mobile services. Such an allocation will help alleviate the critical spectrum shortage for the land mobile community. Motorola urges the Commission to issue authorizations in the 1.4 GHz band through use of a band manager licensing framework and site-specific licensing. Allocation of the 1432 to 1435 MHz and 1392 to 1395 MHz bands through a band manager licensing framework will optimize use of available spectrum while accommodating the spectrum needs of other industry members. Allocation of 1390 to 1392 MHz and 1427 to 1429 MHz for frequency coordinated, site-specific licensing will provide some relief for the many private land mobile users who require low power, coordinated systems to maximize efficiency and safety within their facilities. Finally, Motorola asks the Commission to carefully consider its relocation policies and procedures and work towards a mechanism for expedited Government relocation reimbursement. Critical to this effort is adoption of the Commission proposal to gather and provide all Government relocation costs prior to an auction of reallocated Government spectrum.

Respectfully submitted,

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