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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

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

In the Matter of	)	
	)	
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 RM-7927

To: The Commission

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REPLY COMMENTS OF
ASSOCIATION OF AMERICAN RAILROADS

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June 21, 1995

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SUMMARY

AAR supports the Commission's proposal in this proceeding to adopt the same relocation rules for MSS entry into the 2 GHz band as it did for PCS entry into the 2 GHz band. These rules are essential to prevent disruption of existing services and to minimize the economic burden on the displaced services. The Commission acknowledged the importance of these goals in its Emerging Technologies proceeding. Several of the comments submitted by MSS proponents attempted to divert attention from these goals by claiming that sharing is possible or that it is unfair to require MSS to pay for relocation. Since the MSS users will be receiving the benefit of the spectrum, however, the incumbents should not have to bear the double burden of both paying for relocation and having to relocate. For this reason the Commission should reject the other proposals of the MSS proponents which involved limiting the recovery of relocation costs or requiring incumbent renewals to include migration plans. All of these recommendations are intended to shift the burden from the only ones who are benefiting from the proposed allocation -- the MSS users. The Commission should also reject the proposal to downgrade incumbents to secondary status on a set date because it would undercut the voluntary and involuntary negotiation periods. The deployment of MSS must not be allowed the threaten the operational requirements of the incumbent users.

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The Association of American Railroads ("AAR"), by its undersigned counsel, hereby submits its Reply Comments in the Notice of Proposed Rulemaking in the above-captioned proceeding (hereinafter "Notice"). In this proceeding, the Commission has proposed the allocation of the 1990-2025 MHz and the 2165-2200 MHz bands to the mobile-satellite service ("MSS").

I. Background

AAR filed Comments in this proceeding on May 5, 1995, urging the Commission to adopt the same relocation rules for MSS entry into the 2 GHz band as it did for Personal Communications Service ("PCS") entry into the 2 GHz band. These rules underscore the Commission's recognition of the "important and vital services currently being provided by the 2 GHz fixed microwave facilities" and promote the two main Commission objectives with regard to the relocation: (1) to "prevent disruption of existing 2 GHz services," and (2) to "minimize the economic impact on the

licensees of those services."[1/] This position received widespread support in comments filed by the other incumbents in the 2 GHz bands.[2/]

II. MSS Cannot Share the Bands with the Fixed Service Incumbents

Several MSS proponents claimed that MSS could share the 2 GHz bands with the fixed service and that, therefore, relocation was either not necessary or could be accomplished incrementally.[3/] Comsat submitted a study with its comments purporting to demonstrate that MSS could share with the incumbent fixed microwave users.[4/] The conclusions of this study are unreliable for several reasons. There are crucial details missing from the data, such as whether a fading model was used, what criteria were used to define degradation of service in a fixed microwave system and the specifics of equipment characteristics which would affect system performance. Overall, it does not appear that the Comsat study incorporated the worst case scenario in terms of the C/I ratio. In light of these

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1/ Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, First Report and Order and Third Notice of Proposed Rule Making, 7 FCC Rcd 6886 (1992).

2/ See, e.g., comments filed on May 5, 1995, by Utilities Telecommunications Council ("UTC") at 2; The Association of Public-Safety Communications Officials-International, Inc. ("APCO") at 2; American Petroleum Institute ("API") at 13; Association of Federal Communications Consulting Engineers at 2; Association for Maximum Service Television at 8.

3/ See, e.g., comments filed on May 5, 1995, by Celsat America, Inc. ("Celsat") at 8; Comsat Corporation ("Comsat") at 3.

4/ Comsat, Appendix II.

unknown variables and the state of the information presented to date, it is not possible to conclude that co-service sharing is possible. If frequency sharing in this band is even to be considered it will first be necessary to establish specific standards for interference analysis and frequency coordination, such as Annex F to the Telecommunications Industry Association Bulletin 10-F which addresses PCS/fixed microwave frequency coordination.

Moreover, as Motorola, Inc. ("Motorola") correctly pointed out in its comments, the Report of the Conference Preparatory Meeting ("CPM Report") for the 1995 World Radiocommunication Conference ("WRC-95") has already concluded that sharing will be constrained by interference to satellite receivers in the Earth-to-space allocations and by interference to fixed service receivers in the space-to-Earth allocations. The CPM Report explained that

> Because large geographic areas are visible to a satellite, high aggregate levels of interfering signal power can be received by a satellite as a result of the potentially large numbers of interfering fixed stations and there is a significant probability that antenna main beams of one or more fixed systems will be directed temporarily at non-GSO satellites or permanently at GSO satellites (unless orbit avoidance is used).[5/]

5/ CPM Report on Technical, Operational and Regulatory/Procedural Matters to be Considered by the 1995 World Radiocommunication Conference, ITU-R, Document CPM95/118-E, 22-23, para. 1.4.6 (April 4, 1995) ("CPM Report") (cited by Motorola in comments submitted May 5, 1995 at 16). Motorola stated in its comments that it "agrees with the Commission's views that sharing between MSS and BAS or Fixed Microwave users already occupying the 2 GHz

(continued...)

These sharing problems are far-reaching in scope because "interference could be caused or experienced by fixed stations located far outside the service area of an MSS network."[6/] The CPM Report also advised against sharing between the fixed service and MSS downlinks in the 2160-2200 MHz band, noting that, "[i]n the long term sharing of non-GSO/MSS systems with the [fixed service] systems in the subject bands may become increasingly difficult and complex as MSS traffic levels build up over time with market take-up."[7/] Overall, the CPM Report evaluated the feasibility of sharing between the fixed service and MSS uplinks as "poor" and between the fixed service and MSS downlinks as "moderate-poor".[8/] As the findings of the CPM Report demonstrate, the possibility of interference is real. Any disruption in the railroads' communications facilities poses a grave threat to the safety and reliability of rail transport.

III. There is no Difference Between PCS and MSS Entry into the 2 GHz Band That Would Justify Different Relocation Rules for The Two Services

Many of the MSS proponents opposed application of the same relocation rules that the Commission adopted for PCS entry into

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5/(...continued)
bands is not feasible on a co-frequency basis because of the potential for interference between the services." Motorola at 15.

6/ CPM Report at para. 1.4.6.

7/ Id.

8/ Id. at 31, Table 6.

the band.[9/] The PCS relocation rules reflect a recognition of the benefit received by the emerging technologies and the burden imposed on the fixed microwave licensees and the fair conclusion that, as between the two parties, the beneficiary of the allocation should pay. The PCS relocation rules also recognize that continuity of operation at comparable facilities is essential to the safety and reliability requirements of the incumbent fixed microwave licensees. A similar recognition is necessary to address MSS entry into the 2 GHz band. Any other alternative would place an undue burden of expense and disruption on incumbent users. AAR therefore supports and applauds the Commission's proposal and urges the Commission to guarantee that the microwave licensees will continue to have absolutely reliable communications and full compensation for any relocation.

Several MSS proponents claimed that the relocation rules do not adequately resolve the complex issues of cost allocation because there could be multiple beneficiaries of the relocation spread out over time.[10/] These commenters also insisted that the burden of the relocation costs would impede the development of MSS service.[11/] As between the incumbent users, however, and the displacing newcomers to the band, the incumbents should not have to bear the burden of relocation because they are not

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9/ See comments filed May 5, 1995, by Personal Communications Satellite Corporation ("PCSAT") at 6; Loral/QUALCOMM ("Loral") at 16; TRW Inc. ("TRW") at 5.

10/ See Loral at 2; TRW at 1-3; PCSAT at 7-9.

11/ See Comsat at 2; TRW at 10.

deriving any benefit from the move. By contrast, MSS is receiving a direct and tangible benefit -- additional spectrum. The Broadcast Auxiliary Service and the fixed microwave users should not be required to subsidize the development of MSS. The unlicensed PCS users dealt with the admittedly complex questions involving relocation and cost allocation by working together to develop the UTAM Plan for Financing and Managing 2 GHz Relocation.[12/] Similar options exist for the MSS community.

Many of the proposals by the MSS proponents would frustrate the Commission's clearly articulated goals for relocation. TRW's proposal that, "rather than placing the burden of relocation on the MSS industry, the Commission should encourage incumbent users to relocate over time" turns the philosophy adopted by the Commission in the PCS context on its head. Not only would the incumbents be required to relocate from their existing spectrum, but they would be required to bear the costs of such a relocation. This proposal would be highly burdensome, expensive and disruptive to the existing services.

TRW went on to argue that, if the Commission does require MSS providers to pay for the cost of relocating the 2 GHz incumbents, "2 GHz incumbents should be entitled to only limited compensation."[13/] This recommendation directly contrasts with

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12/ UTAM Plan for Financing and Managing 2 GHz Microwave Relocation, Amendment of the Commission's Rules to Establish New Personal Communications Services, Gen Docket No. 90-314 (August 1, 1994).

13/ TRW at 10.

the relocation rules adopted for PCS. Section 94.59 of the Commission's Rules requires the displacing provider to guarantee "payment of all relocation costs, including all engineering, equipment, site and FCC fees, as well as any reasonable, additional costs that the relocated fixed microwave licensee might incur as a result of operation in another fixed microwave band or migration to another medium." This rule advances the Commission's oft-repeated goal of minimizing the economic impact of the relocation on the incumbent users, and it should be adopted in the current proceeding for the same reason.

IV. The Commission Should Reject Loral's Proposals Concerning Renewals and Downgrading Incumbents to Secondary Status

Loral on the one hand urged the Commission to delay any decision on allocating costs for the relocation of the incumbent users, yet on the other hand encouraged the Commission to develop rules that would force the incumbent users out of the band sooner rather than later. Loral proposed that incumbent users be downgraded to secondary status on a specific date to be set by the Commission.[14/] The Commission rejected a similar proposal in the Emerging Technologies proceeding on the grounds that it "could unduly disrupt the existing 2 GHz services."[15/] The same rationale justifies rejection of Loral's proposal. Because

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14/ Loral at 9.

15/ Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, Third Report and Order and Memorandum Opinion and Order in ET Docket No. 92-9, 9 FCC Rcd 6589, 6596 (August 13, 1993) (hereafter Third Report and Order).

secondary status is not acceptable due to the incumbents' operational requirements, secondary status is synonymous with relocation. Therefore, downgrading the incumbents to secondary status on a set date would promote inefficient use of spectrum because it could result in spectrum lying fallow if incumbents are forced to move out before MSS could even operate in the bands.[16/]

Because operating on secondary status would be squarely inimical to the railroads' high reliability and safety requirements, any downgrading to secondary status must be preceded by paid relocation to comparable facilities. In this regard, AAR interprets proposed Non-Government Footnote 157 to mean that incumbents will not be downgraded to secondary status until the voluntary and mandatory negotiation periods are concluded and involuntary relocation is an available option.[17/] Involuntary relocation would only be possible once new comparable facilities had been built and tested. These measures must precede any relegation to secondary status in order to minimize the disruption to the incumbent users and to satisfy their safety and reliability requirements. AAR opposes Loral's proposal concerning secondary status because it threatens to undermine those very requirements. AAR supports API's proposal that fixed

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16/ In this regard the Commission should avoid any repetition of the Direct Broadcast Satellite ("DBS") allocation experience where the fixed service incumbents were required to move out of the 12 GHz band in the 1980's although DBS did not begin to make use of the band until 1993.

17/ Notice at 15.

service incumbents maintain primary status until they have spent one year operating at the comparable facilities.[18/] This recommendation protects the incumbents' needs more effectively than Non-Government Footnote 157 by providing an extra incentive to the displacing MSS providers to build and test comparable facilities.

The Commission should also reject Loral's two proposals regarding renewal of microwave licenses in the 2165-2200 MHz bands. Loral suggested that after January 1, 2000, the Commission should not allow any renewals of microwave licenses in the 2165-2200 MHz bands except upon a demonstration of impossibility of moving to another band segment.[19/] Loral also recommended that after December 31, 1995, each application for a fixed microwave license renewal should contain a plan for migration into another band segment.[20/] Loral claimed that these measures would help facilitate "an orderly and measured transition."[21/] In fact, these steps would be highly disruptive and would place the burden on the wrong shoulders -- those of the incumbent users. As the Commission stated in the Emerging Technologies proceedings, it is the newcomer to the band that should bear the burden of relocation, not the incumbent.[22/]

18/ API at 14.

19/ Loral at 10.

20/ Id.

21/ Id. at 8.

22/ Third Report and Order at 6590.

These two proposals are an attempt to bypass the voluntary and mandatory negotiation periods and both proposals should, therefore, be rejected.

V. The Incumbent User's Right to Return to its Former or Equivalent 2 GHz Facilities Must be Preserved

The current involuntary relocation rules allow reverse migration in the event the new facilities are not comparable to the existing facilities.[23/] Loral urged the Commission to prohibit reverse migration.[24/] In effect, Loral has claimed the right to disrupt the provision of fixed microwave services while refusing to accept any disruption to its own displacing service. Such a loop-hole in the relocation rules would frustrate the essential goal of the rules -- to minimize disruption to the incumbent users. If reverse migration is not permitted, the displacing user would have no incentive to build and test fully comparable facilities, which are essential to ensure that displaced microwave licensees experience no degradation in reliability or system performance. In the case of the railroads, if new facilities prove not to be equivalent and reverse migration is not an option, the ensuing disruption to the nationwide railroad communications systems could be disastrous.

VI. Conclusion

As long-time users of sophisticated telecommunications systems, AAR and its member railroads support the development of

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23/ 47 C.F.R. § 94.59(e).

24/ Loral at 19.

MSS and other emerging technologies. Nonetheless, AAR's paramount concern in this proceeding is to ensure that the deployment of new technologies does not threaten the safety and reliability of the railroads' private fixed microwave operations. For these reasons, AAR supports the application of the Commission's involuntary relocation rules to MSS and requests the Commission to adopt the proposals and recommendations advanced in AAR's initial Comments and those advanced in this Reply Comment.

Respectfully Submitted,

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