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Federal Communications Commission

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WASHINGTON, D.C.

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)	
)	
Amendment of Section 2.106 of the)	ET Docket No. 95-18
Commission's Rules to Allocate)	RM-7927
Spectrum at 2 GHz for Use by)	
the Mobile-Satellite Service)	

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**REPLY COMMENTS OF
PERSONAL COMMUNICATIONS SATELLITE CORPORATION**

Personal Communications Satellite Corporation ("PCSAT") hereby submits its reply comments on the Commission's Notice of Proposed Rulemaking ("NPRM") in the above-referenced proceeding. As discussed below, the Commission should proceed with an MSS allocation at 2 GHz, while allowing interested parties to negotiate spectrum sharing and relocation issues. Should voluntary negotiations not resolve all issues within 70 days, the Commission should commence an advisory committee to determine whether these issues can be resolved.

In its initial comments, PCSAT supported the Commission's proposal to allocate the 1990-2025 MHz (Earth-to-space) and 2165-2200 MHz (space-to-Earth) bands to the Mobile-Satellite Service ("MSS"), but stated that it was premature to designate use of the spectrum specifically for geostationary or low-Earth orbit satellites, or to impose access methods or power limits on systems using the bands. PCSAT also opposed both the proposal for MSS licensees to pay for relocation of incumbent users and the use of auctions to award licenses for use of the bands.

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Fourteen other parties submitted comments on the NPRM. Most generally supported the new MSS allocation. All parties addressing the issue opposed the use of auctions to allocate the spectrum. These reply comments will therefore be limited to the following issues: implementation of the new MSS allocation, including relocation issues; proposed limitations on use of the bands; and a brief further discussion of auctions.

I. ALLOCATE THE 2 GHz BANDS TO MSS

The evidence in the record overwhelmingly supports the proposition that the additional spectrum at 2 GHz is needed to satisfy the demand for MSS.^{1/} Most recently, in its Report concerning preparations for the 1995 World Radiocommunication Conference ("WRC-95"), the Commission noted that 103 megahertz (in each transmission direction) will be required by 2005 to serve all the projected users. Report, IC Docket No. 94-31, FCC 95-256 (rel June 15, 1995), para. 39. The Report also confirms the Commission's intention to pursue the adjustments necessary in the 2 GHz bands to support the domestic allocations proposed herein. Id. at 42.

Only one party, the American Petroleum Institute ("API") questions whether additional MSS spectrum is needed.^{2/} API states that the Commission should engage in further proceedings before determining whether additional MSS spectrum is needed and pursuing an

^{1/} Comments of Comsat at 8; Comments of Loral/Qualcomm Partnership, L.P. at 3; Comments of Motorola, Inc. at 6; Comments of GE American Communication, Inc. at 1; Comments of Constellation Communications at 1; Comments of Newcomb Communications, Inc. at 2. Comments of Hughes Telecommunications and Space Company at 2; Comments of Celsat, Inc. at 4.

^{2/} The Association of Public-Safety Communications Officials-International, Inc. opposes the allocation based on the inconvenience of its members to relocate. Comments of APCO at 2. As discussed below, such relocation may not be necessary.

allocation in the 2 GHz bands. API Comments, 4-5. API also argues that other mobile services the Commission is licensing (e.g. PCS, Big LEOs and ESMR) will fully saturate the market and eliminate the need for MSS. Id. at 6-7.

API's position ignores the realities of the MSS market. There are many more proposed MSS systems than there is spectrum. The 1530-1544 MHz/1626.5-1645.5 MHz bands that API points to for relief for MSS congestion are of very limited utility. These bands must be shared with the existing worldwide, spectrum-inefficient Inmarsat system. Moreover, these bands cannot be used by low-Earth orbit satellite systems and, therefore, cannot provide any relief for Big LEO licensees in the 1.6/2.4 GHz bands.

Terrestrial mobile systems, such as PCS and ESMR will not eliminate demand for MSS. Instead such systems will increase demand for mobile satellite systems that fill in the gaps that are inevitable among terrestrial systems. For instance, mobile satellite systems in the 2 GHz bands (such as the one proposed by PCSAT) will provide ubiquitous, nationwide coverage for PCS subscribers in areas unserved by terrestrial PCS systems. Since 2 GHz satellite and terrestrial systems will operate in adjacent bands, there will be inexpensive dual mode telephones that can operate in either band, depending on the user's location.

The Commission should not delay the allocation of the 2 GHz bands until after WRC-95.^{3/} By making the domestic allocation prior to the Conference, the Commission will be making a strong statement that it is committed to the continued growth and development of the MSS industry. In its Report, the Commission has earmarked the adjustment to the 2 GHz allocations as the only new MSS allocation in the 1-3 GHz range it intends to seek at WRC-95,

^{3/} See e.g. Comments of Constellation at 2; Comments of Loral/Qualcomm at 7.

making this allocation even more vital. Moreover, the Commission should place the PCSAT and Celsat applications on Public Notice, and establish a cut-off for competing applications.

II. SHARING AND RELOCATION ISSUES

The most difficult issues facing the Commission in this proceeding concern sharing and relocation of existing users. There have been ongoing discussions between the MSS industry and the broadcast and the fixed microwave interests that currently use the proposed frequencies. PCSAT proposes that these voluntary discussions continue for 70 days or until a satisfactory resolution can be reached, whichever occurs sooner. Should the parties fail to resolve the key questions, PCSAT supports Loral/Qualcomm proposal to convene an advisory committee to resolve those issues. Loral/Qualcomm at 12. Such a committee will lead to a better understanding of the parties' positions.

The Commission should not jump to the conclusion that both broadcasters and microwave users must be relocated, and that the MSS systems will pay the relocation costs. As the comments demonstrate, the cost of such relocation is estimated at \$2-3 billion, a crippling sum for a new industry. When combined with the costs of constructing and launching an MSS system (e.g., \$885 million for the PCSAT system and \$2.6 billion for the Inmarsat ICO system), it is highly unlikely that any MSS system will ever operate in the 2 GHz bands. Thus, a solution that avoids relocation or minimizes relocation is the best solution.

In the uplink band, there appears to be consensus that MSS cannot share with the broadcast auxiliary service. In addition, it does not appear that the broadcast auxiliary service can share with the fixed service in the 2110-2145 MHz band, which the Commission has

suggested could be given to broadcasters if they cede the 1990-2025 MHz band. One potential solution is for the broadcasters to gain access to the additional spectrum they seek at 4 GHz in return for ceasing operations in the 1990-2025 MHz band (i.e. channels 1 and 2). See Joint Comments of the Association for Maximum Service Television, Inc. and other Major Television Broadcasting Entities, at 16-17.^{4/}

Another potential solution is for the broadcasters to re-tune their equipment to operate in narrow channels allows MSS to access part of the spectrum. Comments of Comsat; Comments of the Society of Broadcast Engineers (“SBE”). Comsat suggests that the cost of such re-tuning would be approximately \$35 million and SBE estimates the cost at about \$300 million.

In the downlink band, Comsat submitted a study demonstrating that sharing may be possible between the proposed Inmarsat ICO system and fixed microwave users. The Comsat study raises important questions. PCSAT is independently studying the sharing possibilities and expects to provide additional information showing that sharing is even more likely with the PCSAT system.

^{4/} Creative Broadcast Techniques, Inc. and The New Vision Group, Inc., licensees of Local Television Transmission Service facilities in the 1.9 GHz band argue that they should be eligible for relocation. At this time, PCSAT has not studied whether sharing with the LTTS is feasible, but recommends that LTTS licensees should participate in the industry meetings to the extent their interest are not represented by other groups.

III. THE COMMISSION SHOULD MAINTAIN A FLEXIBLE ALLOCATION

Certain parties have proposed limitations or requirements on use of the 2 GHz bands including access by non-geostationary systems^{5/}; access schemes^{6/}; establishment of power limits^{7/}; global coverage^{8/}; no existing licensee.^{9/} None of these limitation or requirements should be adopted at this time but rather in a separate proceeding establishing rules to operate in the band. At this time, the Commission should keep the allocation as flexible as possible. The Commission should establish the technical criteria to operate in the band only after accepting applications from potential system operators that demonstrate that they are committed to building systems to operate in these bands.

The Commission should reject Celsat's proposal to prohibit existing MSS licensees from obtaining licences in the 2 GHz bands. Celsat argues that if existing licenses acquire 2 GHz licenses, they could achieve a dominant market position and stifle competition from new entrants. Comments of Celsat at 5. The Commission has previously declined to impose spectrum caps on satellite providers of commercial mobile radio services. Third Report and Order, 9 FCC Rcd 7988, 8112 (1994). The Commission excluded MSS from spectrum caps because the service is relatively expensive, generally will not be a constraining factor on the price of terrestrial services, and MSS operators are subject to coordination and allocation considerations that distinguish them from terrestrial mobile service providers.

^{5/} Comments of Teledesic.

^{6/} Comments of TRW; Comments of Celsat, Inc.

^{7/} Comments of TRW.

^{8/} Comments of Comsat; TRW; Comments of Constellation.

^{9/} Comments of Celsat, Inc.

Moreover, the AMSC system will be saturated by 1998. The 2 GHz bands offer the logical growth opportunity, servicing to users of new personal communication services who travel outside the coverage of terrestrial systems. Furthermore, Celsat ignores that AMSC will have access to far less spectrum than it has been assigned as a result of the international coordination process. In addition, AMSC must provide priority and preemptive access to safety services operating in its assigned frequencies, reducing the spectrum available for non-safety services; there is even a possibility that safety services could require access to the entire band, leaving no spectrum for non-safety services.

IV. AUCTIONS ARE INAPPROPRIATE FOR MOBILE SATELLITE SERVICE

The commentors unanimously oppose the use of auctions for the mobile satellite service.¹⁰⁷ Several parties noted that auctions are inappropriate at this time because the Commission has not yet determined that mutually exclusive applications for the 2 GHz frequencies exist. The applicants may be able to resolve any mutual exclusivity through engineering solutions or negotiations. Before resorting to auctions, the Commission should first make every effort to determine whether mutual exclusivity can be avoided.

The comments also revealed that auctions for MSS would be exceedingly difficult to administer. Accurate valuations of spectrum through the use of simultaneous multiple round auctions would be impossible since MSS providers would be forced to bid without the knowledge of when--or even if--further auctions payments would be necessary in other

¹⁰⁷ See Comments of Comsat at 24; Comments of GE Americom at 13; Comments of Constellation at 4; Comments of Hughes at 5; Comments of Iridium at 1; Comments of LQP at 25; Comments of Motorola at 24; Comments of TRW at 18; Comments of PCSAT at 11; Comments of Teledesic at 10.

jurisdictions. Valuation and implementation would be further hindered by the coordination process, leaving prospective licensees uncertain about how much spectrum they would be left with after coordination. The parties also agreed the use of auctions could trigger further auctions or other retaliatory measures in other countries.^{11/}

CONCLUSION

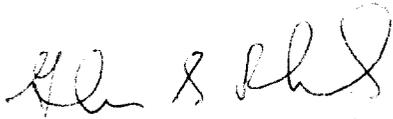
Personal Communications Satellite Corporation urges the Commission to expeditiously allocate the 1990-2025 MHz and 2165-2200 MHz bands to MSS. Though all issues may not be resolved, the Commission should proceed with an allocation while interested parties continue to voluntarily meet to resolve, sharing and relocation issues. The voluntary meetings should last for 70 days; after which time an advisory committee can be established to help settle any remaining disputed issues. The Commission should not impose at this time any restrictions on the use of the spectrum. Instead, the Commission should put the already-filed applications on Public Notice, establish a cut-off for competing applications, and initiate a

^{11/} See Comments of Comsat at 27-29; Comments of GE Americom at 20; Comments of Motorola at 24; Comments of PCSAT at 14-15.

rulemaking to create service rules for use of the bands based on the filed applications. Finally, the Commission should reject the use of auctions to allocate the spectrum.

Respectfully submitted,

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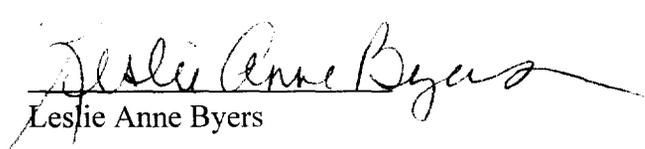
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