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Federal Communications Commission
Office of the Secretary

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

In the Matter of the Petitions of:	
CONSTELLATION COMMUNICATIONS, INC.	RM No. 7771
TRW, INC.	RM No. 7773
AMERICAN MOBILE SATELLITE CORPORATION	RM No. 7806
ELLIPSAT CORPORATION	RM No. 7805
For Amendment of Parts 2, 22 and 25 of the Commission's Rules to Allocate Spectrum for, and to Establish Other Policies Relating to Satellite Systems in the RDSS Bands.	

COMMENTS

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October 16, 1991

SUMMARY

Motorola Satellite Communications, Inc. hereby opposes the petitions for rulemaking filed in this proceeding. Rather than conduct a lengthy and time-consuming rulemaking proceeding at this time to reallocate the spectrum and abandon the RDSS rules, the Commission should continue to process the pending RDSS applications on an expedited basis. Prompt action on these applications is especially desirable as the World Administrative Radio Conference ("WARC-92") approaches. The United States positions at WARC-92 would be furthered significantly by any positive steps the Commission takes toward granting licenses in the RDSS bands.

Specifically, the Commission must carefully review each of the pending applications to determine whether the applicants have the technical and financial resources and commitment to implement their programs. The RDSS bands have remained unused for too many years to allow speculative ventures to get in the way of truly qualified applicants that are ready, willing and able to proceed with the construction of their proposed systems.

Motorola therefore urges the Commission to take the following steps:

(1) Return as unacceptable for filing those applications which fail to provide all of the information required by the rules;

(2) Apply strict qualification standard to each of the pending applicants, including more stringent financial and technical requirements;

(3) Dismiss any application that does not proposed to offer "true" radiodetermination services;

(4) In the event that all of the remaining fully qualified applicants can be accommodated in the available spectrum, promptly grant each applicant a construction permit;

(5) In the event that not all of the remaining qualified applicants can be accommodated in the available spectrum, establish comparative criteria and hold streamlined comparative hearings to choose amongst the applicants; and

(6) Establish stringent progress milestones for constructing, launching and operating any licensed systems.

If all of these suggestions are adopted, Motorola believes that there will be no need to make any of the rule changes proposed by petitioners. First, the Commission can grant through the waiver process any application which proposes a nonconforming use of the spectrum so long as well-established criteria are met. At some later point in time, the Commission can decide to propose amendments to the allocation tables in light of decisions made at WARC-92.

Second, it is not in the public interest to adopt the reallocation proposals made by American Mobile Satellite Corporation ("AMSC"). While those proposals obviously would promote AMSC's private interests, they are not in the public interest. AMSC has tentatively been licensed 28 MHz in the L-band and has proposals for up to an additional 35 MHz outside the RDSS bands. Its current proposal to take over the RDSS bands for its own use would prevent any RDSS systems from ever operating in the bands and would be contrary to the United States positions at WARC-92.

Third, Ellipsat's and TRW's proposed technical rule changes are not in the public interest. The use of the RDSS bands for feeder links is an extremely inefficient means of utilizing valuable L-band spectrum. Other frequency bands in the fixed-satellite service are available for this purpose. TRW's proposed power flux density changes do not take into account possible service to portable handheld units, and fail to account for all of the fixed services already operating in the RDSS downlink band.

Finally, Constellation's proposals are ill-conceived and contrary to the public interest. Of particular concern to Motorola is the suggestion that each applicant be allotted as little as 2 MHz of L-band spectrum to operate their systems. While such limited bandwidth may be sufficient for Constellation, it clearly is not enough to satisfy Motorola's spectrum requirements.

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COMMENTS

Motorola Satellite Communications, Inc. ("Motorola"), through its attorneys, hereby submits its comments in opposition to the above-captioned petitions for rulemaking of Constellation Communications, Inc. ("Constellation"), TRW, Inc. ("TRW"), American Mobile Satellite Corporation ("AMSC"), and Ellipsat Corporation ("Ellipsat").[1/] The requested rule changes are unnecessary and would be contrary to the public interest. Rather than conduct a time-consuming rulemaking proceeding to reallocate spectrum and abandon the RDSS rules, the Commission should

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[1/] These comments are timely filed pursuant to the Commission's Public Notices, Report No. 1855 (August 13, 1991) and Mimeo No. 14747 (September 13, 1991), accepting the petitions for filing and requesting comments from interested parties.

continue to process the pending RDSS applications on an expedited basis. Any positive steps the Commission takes toward granting licenses in the RDSS bands also would further the United States positions at the upcoming World Administrative Radio Conference ("WARC") in Spain.

Regardless of the manner in which the Commission decides to proceed in the processing of the pending RDSS applications, its ultimate licensing decisions must carefully weigh the qualifications of all of the applicants and their ability to proceed promptly with the construction, launch and operation of their proposed systems. The RDSS bands in the United States have remained fallow far too long, and the Commission cannot continue to license all applicants with the hope that they will follow through and deploy needed satellite systems. Only truly qualified applicants with the financial resources, technical qualifications and commitment to proceed with their business plans should be given an opportunity to use such valuable spectrum.

Accordingly, Motorola urges the Commission to take the following actions on an expedited basis:

(1) Return as unacceptable for filing those applications which fail to provide all of the information required by the rules;

(2) Apply strict qualification standards to each of the pending applicants, including more stringent financial and technical requirements;

(3) Dismiss any application that does not propose to offer "true" RDSS services;

(4) In the event that all of the remaining fully qualified applicants can be accommodated in the available spectrum, promptly grant each applicant a construction permit;

(5) In the event that not all of the remaining qualified applicants can be accommodated in the available spectrum, establish comparative criteria and hold streamlined comparative hearings to choose amongst the applicants; and

(6) Establish stringent progress milestones for constructing, launching and operating any of the licensed systems.

I. INTRODUCTION

Currently pending before the Commission are six applications proposing various uses of the RDSS bands. Only two of these applications have been accepted for filing -- the applications of Motorola and Ellipsat -- with the comment period completed for both. The remaining four applications, along with a substantial amendment from Ellipsat, were received within the filing window established by the Commission.[2/] As of this date, none of these other applications have been accepted for filing.

[2/] See Public Notice, Report No. DS-1068 (April 1, 1991).

Of the current group of applicants, Motorola and two others -- Loral Cellular Systems Corp. ("Loral") and Constellation -- have proposed mobile satellite systems in polar low-Earth orbit ("LEO"). Satellites of TRW's Odyssey system would operate in medium-Earth orbit ("MEO"), while satellites of both of Ellipsat's systems would traverse the globe in elliptical orbits. All of these non-geostationary satellite applications propose to operate systems which provide a range of mobile communications services including RDSS. Only AMSC's application for a geostationary MSS system does not contemplate the provision of true RDSS within the bands allocated for this service.

None of the pending applications propose systems that fully comply with all of the FCC's existing technical rules and international regulations. Motorola and Loral (systems A & C) have proposed the bidirectional use of the RDSS uplink band. Motorola, Constellation and AMSC envision the use of modulation techniques other than spread spectrum -- FDMA and TDMA. Ellipsat Loral and TRW, on the other hand, favor CDMA as the basis for sharing spectrum, although none of these applicants has proposed to spread their CDMA signals over the entire RDSS uplink and downlink bands as required by the rules.[3/] Several of the

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[3/] Although Ellipsat and TRW claim to be in compliance with the RDSS rules, it is clear that neither one meets this spread spectrum requirement. Ellipsat proposes to spread its signal over ten 1.4 MHz channels, while TRW's system contains three 5 MHz channels in each band. Loral proposes thirteen channels in the bands. The Commission has already determined that such systems do not comply with the RDSS rules. See Supplemental Notice of Inquiry, GEN Docket No. 89-554, 6 F.C.C. Rcd. 1914, 1917 (1991) ("The Ellipsat application provides an FDMA/CDMA modulation architecture that was not originally envisioned for

(continued...)

proposed systems also exceed the S-band power flux density limits set forth in the international Radio Regulations for the RDSS downlink band.

The four rulemaking petitions request various rule changes for the future allocation of the RDSS bands, as well as the licensing and regulation of LEO satellite systems in these bands. Both TRW and AMSC propose a reallocation of the RDSS bands in the domestic allocation tables. TRW suggests an amendment which would allow only spread spectrum mobile voice and data services to be provided along with RDSS. TRW also proposes that 220 MHz in the Ka-band be allocated for RDSS feeder links and that the Commission relax PFD limits in the RDSS downlink in order to accommodate TRW's system. AMSC, on the other hand, desires the absolute elimination of the entire RDSS allocation, with the substitution of an MSS allocation for 1616.5-1626.5 MHz. AMSC further proposes a new downlink MSS allocation for 1515-1525 MHz to be paired with the L-band uplink frequencies, and also requests that the Commission assign both of these bands only to AMSC for domestic MSS without further proceedings.

Ellipsat does not believe that any rule changes are required to authorize its systems. It asserts that the Commission can act through waivers to permit mobile voice services and associated feeder links in the RDSS bands. Ellipsat states that its rulemaking petition is only being filed as a

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3/ (...continued)
the RDSS where the CDMA signal occupied the entire 16.5 megahertz and coordination of systems was envisioned to require the coordination of coding schemes.").

protective measure to ensure compliance with the requirements for obtaining a pioneer's preference.[4/]

Constellation suggests a regulatory structure for processing the pending group of applicants. It initially recommends that the Commission maintain its multiple entry policies by granting to each of the qualified applicants as little as 2 MHz of RDSS L-band spectrum and that all of these applicants share access of the RDSS S-band on a non-exclusive basis. Constellation further proposes that operating criteria be established to allow for multiple LEO systems, that a committee of licensees be formed to coordinate system implementation, that a mechanism be established for assigning additional bandwidth in the future, and that licensees be granted a renewal expectancy.

II. THE COMMISSION SHOULD NOT CONDUCT A LENGTHY RULEMAKING PROCEEDING IN ADVANCE OF PROCESSING THE CURRENT GROUP OF RDSS APPLICANTS

A. A RULEMAKING PROCEEDING AT THIS TIME IS NOT REQUIRED TO REALLOCATE THE RDSS FREQUENCY SPECTRUM

It is not essential to institute any rulemaking proceedings to amend the domestic Table of Allocations in order to authorize mobile voice and data services in the RDSS bands. Applicants must be permitted to offer mobile voice and data services in the RDSS bands in order to have a viable RDSS system.

[4/] See Petition for Rulemaking of Ellipsat, at 3-4 (July 29, 1991). Motorola is also filing on this date a separate rulemaking petition in order to protect its right to request a pioneer's preference. See Petition for Rulemaking of Motorola (Oct. 16, 1991).

The RDSS rules, however, already allow for such services on an "ancillary" basis,[5] and the Commission has the authority to grant waivers of the allocation rules to permit any additional nonconforming uses of the radio spectrum.[6]

In its RDSS Licensing Order, the Commission clearly stated that waivers to permit the provision of mobile voice and data services in the RDSS band might be forthcoming if an applicant were to demonstrate "a compelling justification for a waiver" and "that its system [would] not in fact cause interference" to existing RDSS licensees. 104 F.C.C.2d at 660. Generally, in considering requests for non-conforming use waivers, the Commission applies four criteria:

(1) whether the frequencies requested are underutilized;

(2) whether the proposed use of the frequencies will not be detrimental to their assigned users;

(3) whether no other existing frequency allocations are suited for or are sufficient to accommodate the applicant's requirements; and

(4) whether the public interest will be served by a grant of the waiver.[7]

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[5] RDSS Licensing Order, 104 F.C.C.2d 650, 662-63 (1986).

[6] In this regard, Motorola is in essential agreement with Ellipsat when it states that "[t]he Commission has authority, under well-established precedent, to permit mobile voice services in the RDSS bands pursuant to a waiver." Ellipsat Petition at 3 & n.5, and cases cited therein. See also, In re Request of Fleet Call, Inc., 6 F.C.C. Rcd. 1533, 1536 (1991); In re Aeronautical Radio, Inc., 5 F.C.C. Rcd. 3038 (1990); In re Communications Satellite Corporation, 5 F.C.C. Rcd. 4117 (1990).

[7] See. e.g., Bangor and Aroostook R.R., 5 F.C.C. Rcd. 1199 (1990); Big Bend Telephone Co., 2 F.C.C. Rcd. 2413 (1986); In re DBS Systems, 92 F.C.C.2d 64, 68 (1982).

Motorola has already demonstrated, both in its IRIDIUM™ system Application,[8] and in its Consolidated Opposition and Reply in support of that Application,[9] that all of these criteria have been met. The RDSS bands have remained virtually unused for six years, because of the inability of licensees to bring dedicated RDSS systems into operation. Motorola has demonstrated that the IRIDIUM™ system will not cause interference to Geostar, the only licensed RDSS operator, or to other compliant RDSS systems. There is no other currently available spectrum for which Motorola could apply to operate IRIDIUM™.

Finally, grant of a waiver will serve the public interest by fostering the Commission's mobile satellite and RDSS policies, by making efficient use of scarce spectrum, by meeting the growing and immediate demand for portable mobile communications, and by providing enhanced service opportunities to RDSS users. Because these waiver criteria have been satisfied and at least one applicant is ready, willing and able to offer the full range of RDSS and mobile communications services in the RDSS uplink band, there is no reason to initiate rulemaking proceedings now. Any rulemaking proceeding to reallocate the spectrum could last for several years, during which time the RDSS frequencies would continue to be underutilized, to the detriment of the public.

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[8] Application of Motorola Satellite Communications, Inc. for a Low-Earth Orbit Satellite System, File Nos. 9-DSS-P-91(87) & CSS-91-010, at 97-102 (December 1990) ("Application").

[9] Consolidated Opposition and Reply of Motorola Satellite Communications, Inc., at 19-24 (July 3, 1991) ("Consolidated Opposition and Reply").

In addition, the immediate grant of applications from unquestionably qualified entities would benefit the United States positions at WARC-92 to a much greater extent than the establishment of a domestic rulemaking proceeding. The Commission would best allocate its limited staff resources by meeting with foreign administrations and gaining support worldwide for the United States WARC-92 positions. Once WARC-92 is completed and new allocations are adopted internationally, there will be ample time and significantly enhanced information with which to institute such a proceeding, if necessary.

In particular, TRW's proposed rule changes are not consistent with the United States positions at WARC-92. TRW's specific suggestion to require spread spectrum modulation characteristics in the RDSS bands for the provision of MSS services was specifically rejected by the Commission in its WARC-92 Inquiry proceeding. The Commission initially proposed that MSS services in the RDSS bands have CDMA characteristics compatible with existing RDSS systems and that they comply with the restrictions set forth in the international Radio Regulations.[10/] It subsequently questioned the need for such compatibility provisions in its Supplemental Notice of Inquiry.[11/] The Commission ultimately decided to revise its recommended proposals to exclude any mention of a particular modulation technique for demonstrating compatibility of MSS and RDSS

[10/] See Second Notice of Inquiry, GEN Docket No. 89-554, 5 F.C.C. Rcd. 6046, 6101 (1990).

[11/] Supplemental Notice of Inquiry, 6 F.C.C. Rcd. at 1917.

systems. Thus, the U.S. proposals no longer contain any compatibility restrictions based on using CDMA modulation characteristics, and instead only generally refer to the introduction of MSS "in accordance with appropriate CCIR Recommendations in order to ensure compatibility with the radiodetermination-satellite service."[12/]

Moreover, as set forth in Motorola's earlier submissions in support of its IRIDIUM™ Application, there is no magic to CDMA spread spectrum systems. While such modulation techniques theoretically may offer the opportunity for multiple systems in the same frequency spectrum, there are significant limitations associated with CDMA spectrum sharing between multiple operational satellite systems, particularly where the bandwidth proposed or available for spread spectrum is limited.[13/]

B. THE COMMISSION SHOULD REJECT AMSC'S PETITION TO REALLOCATE THE RDSS BANDS SOLELY FOR MSS SERVICES

Motorola agrees with those petitioners and applicants who assert that there is insufficient market demand for a dedicated RDSS system in the United States, even one offering ancillary messaging and data services. The recent demise of Geostar Positioning Corporation ("Geostar") as well as the earlier withdrawal of the three other original RDSS applicants clearly demonstrate the current lack of interest in the

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12/ WARC-92 Report, 6 F.C.C. Rcd. at 3939 n. 733Z.

13/ See Consolidated Opposition and Reply, at 32-34 & Appendix B.

marketplace for such a system. The applications of Motorola and the other RDSS applicants further confirm this conclusion. All of the proposed non-geostationary satellite systems anticipate providing MSS as well as RDSS, while AMSC does not propose to offer any true RDSS.

The fact that the Commission's original vision for the RDSS spectrum may not have proven to be entirely accurate, however, does not mean that radical surgery is required. AMSC's view of the marketplace and its articulated need for more spectrum do not justify the elimination of the RDSS allocation in its entirety. Rather, the Commission has correctly identified in its WARC-92 Report the public interest benefits for maintaining the RDSS allocation domestically and recommending its worldwide primary status along with a co-primary MSS allocation.[14/]

AMSC's proposed rule changes would encourage the Commission to abandon reasoned decision-making and procedural fairness. Not only would such a reallocation eliminate the possibility of providing any true radiodetermination services in the designated bands, it also would preserve a facilities-based monopoly for mobile satellite communications throughout the L-band (1616.5 - 1660.5 MHz). As the Commission is well aware, AMSC currently is the only entity authorized to construct and operate an MSS system in the United States. If the Commission were to allow AMSC to occupy the remaining available L-band spectrum, then there would be little, if any, likelihood of another facilities-based carrier providing competitive domestic

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[14/] See WARC-92 Report, 6 F.C.C. Rcd. at 3906.

services in this decade. Any rulemaking proceeding which even suggests such a result would have significant adverse consequences for the U.S. positions at the upcoming WARC conference.[15/]

C. ELLIPSAT'S FEEDER LINK PROPOSAL SHOULD BE REJECTED

In addition to the reasons stated above for not instituting any reallocation proceeding for RDSS, Motorola urges the Commission to reject Ellipsat's current request to authorize the operation of domestic feeder links in the RDSS bands. Ellipsat provides minimal justification for such a clearly inefficient use of the limited RDSS frequency spectrum in the United States. In essence, Ellipsat would like the option to combine its feeder and communications links in order to reduce the costs and complexities of its satellite design. It states, however, that it would be willing to use any other frequencies for its feeder links if so directed by the Commission.[16/]

Motorola has previously pointed out to the Commission the significant deficiencies associated with Ellipsat's system design.[17/] Other parties have also commented on the problems associated with the inclusion of feeder links in the RDSS

[15/] AMSC's proposed reallocation of the 1515-1525 MHz band as an MSS downlink to be paired with its use of the 1616.5-1626.5 MHz band is also contrary to the United States position at WARC-92. See WARC-92 Report, 6 F.C.C. Rcd. at 3906-09.

[16/] Ellipsat Petition at 7-8.

[17/] Motorola's Petition to Dismiss and/or Deny, File No. 11-DSS-P-91(6), at 15-17 (June 3, 1991).

bands.[18] To the extent that Ellipsat may accrue potential cost savings from such a design, it would impose increased costs to other users of the same frequency spectrum stemming from an overall reduction in traffic capacity as well as increased interference potential.

The Commission has allocated alternative frequency bands in the fixed-satellite service for use by RDSS systems for links to and from their control centers,[19] and higher frequencies with more available spectrum can be used for such purposes. Motorola and others have applied for spectrum in the C- and Ka-bands for their gateway and satellite control facility links. So long as sufficient bandwidth remains available in other portions of the spectrum, no satellite provider should be allowed to employ the limited mobile satellite spectrum in the L-band for fixed gateway and control links.[20]

D. THE COMMISSION SHOULD NOT RELAX THE POWER FLUX DENSITY RESTRICTIONS AS PROPOSED BY THE PETITIONERS

Both TRW and Constellation propose that the Commission relax the existing power flux density (PFD) limits in the 2483.5-

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[18] Comments of Constellation, File No. 11-DSS-P-91(6), at 7-8 (June 3, 1991).

[19] See 47 C.F.R. § 25.202(a)(2) (1990).

[20] Motorola does not believe that it is necessary to reallocate the 29.5-30.0 MHz and the 19.7-20.2 MHz bands for feeder links as requested by TRW in its petition. See TRW Petition at 18-21. By definition, these fixed-satellite services bands can already be used by RDSS systems for feeder links. See RDSS Licensing Order, 104 F.C.C.2d at 651 n.4.

2500 MHz band in order to permit their proposed systems to operate.[21] TRW argues that voice service cannot be offered in this band unless these PFD limits are relaxed, pointing out that none of the applicants proposing to operate downlinks in the S-band conform to the existing PFD requirements.

The Commission should reject TRW's proposed rule changes because they fail to take into account possible service to portable handheld units. The proposed levels are based on service to mobile units with directional antennas. Handheld units will require satellite downlinks with significantly higher power flux density levels (about -120dBW/4kHz), in order to account for environmental shadowing effects and the use of omni-directional antennas. Moreover, before any changes are made to the PFD limits in the S-band, the Commission must evaluate the fixed services already located in that band, and ensure that no harmful interference would affect existing users.[22]

E. CONSTELLATIONS' RULEMAKING PROPOSALS ARE NOT WORTHY OF FURTHER CONSIDERATION

Similarly, there is no need, as Constellation appears to suggest, for new rules designed specifically to govern the

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[21] See TRW Petition at 11; Constellation Petition at 12.

[22] AMSC's proposed reallocation of the RDSS bands also would result in the removal of certain PFD limits in the L-band. Such a change would be contrary to the United States WARC-92 position to allow for the secondary usage of the RDSS uplink band for space-to-Earth transmissions. See WARC-92 Report, 6 F.C.C. Rcd. at 3907-08.

operation of LEO systems in the RDSS bands.[23] Constellation offers no reasons why the existing rules are insufficient to regulate the provision of service in these bands by both LEO and geostationary systems. To the extent that systems like IRIDIUM™ do not comply with the technical rules promulgated for RDSS systems, but do not cause harmful interference to compliant systems, the Commission can and should waive those rules where the public interest so warrants.[24] The Commission should not delay the implementation of service by proposing wholesale technical rule changes when none are required.

Nor is it true, as Constellation asserts, that Motorola seeks to obtain exclusive use of the RDSS L-band. Motorola has demonstrated that its IRIDIUM™ system is compatible with the current baseline RDSS system, and that it can operate side by side with other compliant RDSS systems.[25] Thus, the Commission's existing rules, with appropriate waivers, remain entirely adequate to regulate both LEO and geostationary satellite applicants.

The specific suggestions set forth in Constellation's regulatory proposal also should be rejected as contrary to the public interest. Of primary concern to Motorola is the proposal

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[23] See Constellation Petition at 4.

[24] Motorola has requested waivers of the Commission's rules to allow for bidirectional operations in the RDSS uplink band and for the use of modulation techniques other than CDMA spread spectrum. Motorola has fully justified the granting of these waiver requests in its application and subsequent pleadings in support of its application. See Application at 102-04; Consolidated Opposition and Reply, at 25-28.

[25] See Consolidated Opposition and Reply, at 29-32.

of Constellation to grant all qualified applicants as little as 2 MHz of L-band spectrum for their initial systems. While this amount of spectrum may be sufficient for Constellation's proposed system, it does not nearly meet the requirements of the IRIDIUM™ system. As set forth in its application, Motorola must have authority in the United States to use at least 10.5 MHz of useable L-band spectrum on a bidirectional basis in order to meet anticipated demand with the level of service availability users require.[26/]

It would be foolhardy to suggest that one, yet alone all, of the pending applicants would be able to finance the construction of a constellation of satellites subject to the overall capacity limitations proposed by Constellation. Even if they could do so, the net effect would be a conglomeration of systems which in combination still would not be nearly as spectrally efficient as the IRIDIUM™ system. By operating in a bidirectional mode and by reusing this bandwidth more than five times within the contiguous United States and over two hundred times worldwide, the IRIDIUM™ system will be the most spectrally efficient satellite system ever placed in service.

Motorola further believes that while the establishment of operating criteria and coordination committees may be appropriate in the future to address interference issues and compatibility questions, such matters are not now ripe for

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[26/] Of the 16.5 MHz available in the RDSS uplink band, Motorola does not anticipate being able to use the lower 6 MHz due to potential interference to and from radio astronomers and the Russian GLONASS system when it becomes fully operational.

Commission consideration. Indeed, no action need be taken on these issues until the Commission has determined that two or more applicants are fully qualified to proceed with construction of potentially incompatible systems.

III. MOTOROLA'S SUGGESTIONS FOR PROCESSING THE CURRENT GROUP OF RDSS APPLICATIONS

Motorola has previously made suggestions to the Commission for processing the current group of applicants.[27/] Based upon its preliminary review of the pending applications, Motorola believed that it was unlikely that all of the proposed systems would be able to coexist in the same frequency spectrum or to obtain sufficient financing to proceed with their plans. Accordingly, Motorola proposed that the Commission apply stringent qualifications standards to each of the pending applicants in order to determine which ones truly are capable of constructing their proposed systems immediately upon authorization. Those applicants found unqualified would be dismissed outright without any further consideration. Motorola further urged that the Commission dismiss any applicant who did not propose to provide, or was unable to provide, "true" RDSS on its system. And finally, Motorola suggested that the Commission maintain its policy of conditioning any license award on the achievement of strict project milestones for the construction and launch of their systems.

[27/] See Consolidated Opposition and Reply, at 39-46.

The assumptions, which formed the basis for Motorola's earlier processing suggestions, have now been confirmed. It is clear that as currently designed, all of the proposed systems cannot technically share the same frequency spectrum. It is equally clear that the marketplace will not support the construction of all of these systems even if a mechanism could be worked out for sharing spectrum. In light of these facts and the need for expedition, Motorola offers the following plan for processing the current group of applicants. This plan incorporates Motorola's earlier suggestions and expands upon them in several important respects.

A. THE COMMISSION SHOULD ACT EXPEDITIOUSLY

Motorola urges the Commission to act promptly and decisively in addressing the pending petitions for rulemaking and associated applications. These applications clearly demonstrate a need in this country for RDSS and other satellite-based mobile communications services. Such services can only be made available to the public through licensed systems authorized by the Commission and then built and placed in operation by the licensees. Most of the proposed systems are extremely complex and will require the investment of significant financial and other resources. They also will take several years to become operational. Any regulatory delay in approving the pending construction permits will further delay the implementation of service to the public. For example, in order for the IRIDIUM™

system to begin operations in 1996-1997, it must start construction early next year on its initial group of satellites.[28/]

Any positive steps the Commission takes toward granting licenses prior to WARC-92 can be expected to further the U.S. positions at the conference. Such actions would convincingly demonstrate the United States' commitment to having a viable satellite system operating in the RDSS bands. It also would support the use of these bands for RDSS and generic MSS. Moreover, it can be anticipated that once decisions are made at WARC-92 concerning the reallocation of the RDSS bands and possible future spectrum for LEO and geostationary mobile satellite systems, other countries and institutions will enter the marketplace. Indeed, INMARSAT recently announced that it has been considering LEO system similar to IRIDIUM™ for the provision of portable mobile satellite services and expects to propose such a system once decisions are made at WARC-92.[29/] In order for the United States to benefit from any of the proposed systems under consideration, the Commission must proceed with all deliberate speed in processing the current group of applicants. The

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[28/] Motorola filed a Section 319(d) waiver request with its system application to begin construction, at its own risk, prior to the award of a license. See Request for Waiver Under Section 319(d) of the Communications Act, File Nos. 9-DSS-P-91(87), CSS-91-010 (Dec. 3, 1990). That request has been pending for almost one year, and is hereby renewed.

[29/] See Telecommunications Reports, "INMARSAT Unveils Plan for Personal Land Mobile Service Via Hand-Held Voice Terminals Augmenting Terrestrial Cellular Systems by Year 2000; Project 21' Satellite System Likely to Include LEOs, 'HEOs', In Combination with Current Geostationary Spacecraft" (Sept. 16, 1991).

Commission cannot afford to get bogged down in prolonged rulemaking proceedings.

B. THE COMMISSION SHOULD APPLY STRICT QUALIFICATION STANDARDS TO EACH OF THE PENDING APPLICATIONS

The Commission should impose strict qualification standards on the pending applications to ensure the prompt provision of radiodetermination, voice, and data services in the RDSS bands. It is increasingly clear that the Commission will not be able to accommodate all of the system applicants in this bandwidth. Although it was initially hoped that as many as twelve distinct systems could be placed in the RDSS bands,[30/] the six applications currently before the Commission raise enough interference concerns to seriously undermine any expectation that multiple systems can successfully coexist in the allocated spectrum. At the same time, it is evident that the financial community cannot support all of the proposed systems even if all of them could be accommodated technologically. This combination of circumstances makes it essential that the Commission determine which applicants are truly qualified -- financially, technically and otherwise -- to undertake the substantial risks associated with launching and operating their proposed systems.

There is ample authority for the Commission to deny outright, without a hearing, patently defective applications and applications from unqualified applicants. Section 308(b) of the

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30/ RDSS Licensing Order, 104 F.C.C.2d at 663 n.44.