

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

ORIGINAL

In the Matter of:

**Establishing Rules and Policies
For the Use of Spectrum for Mobile
Satellite Service In The Upper And
Lower L-Band**

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

IB Docket No. 96-132

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**REPLY COMMENTS OF
MOTOROLA SATELLITE COMMUNICATIONS, INC.
AND IRIDIUM LLC**

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SUMMARY

Motorola Satellite Communications, Inc. ("Motorola") and Iridium, LLC ("Iridium") support the overwhelming majority of commenters who oppose the Commission's proposal to provide AMSC with preferential access to up to 28 MHz of spectrum in the lower L-band. The Commission should carefully rethink its proposal to provide AMSC's outdated system with even more MSS spectrum that could be better used by second generation geostationary and non-geostationary MSS systems. Motorola and Iridium oppose the Commission's tentative decision for the following reasons:

FIRST, as L/Q Licensee states, the Commission cannot apply Section 316 of the Communications Act of 1934, as amended, to modify AMSC's existing license by assigning it an "unqualified right" to 28 MHz of additional spectrum. There is simply no precedent or justification for using this procedure to assign one entity with unfettered access to spectrum allocated for general use.

SECOND, the Commission has not demonstrated the compelling factors that might justify the exclusive assignment of spectrum without opening a processing round that is otherwise required by Section 309 of the Communications Act. The D.C. Court of Appeals has refused to sanction the Commission's mandatory consortium approach that did away with competing applications and the Commission now seeks to extend this "dubious" creation by providing it with preferred access to scarce MSS

spectrum that other entities are willing and able to use. As the court explained in Aeronautical Radio v FCC, the FCC cannot establish a licensee itself by rule.^{1f}

THIRD, the Commission has manipulated its procedural rules through a selective freeze on "generic" MSS applicants in a way that forecloses competition from other MSS applicants. Rather than cementing AMSC's status as the only U.S. domestic provider of MSS in the lower L-band, the Commission should make this spectrum available to all eligible companies who wish to compete with AMSC to provide both domestic and international MSS service to the public. The creation of competitive providers of MSS service is consistent with the Commission's "open skies" policy that has worked so well in every other satellite service.

FOURTH, while AMSC argues that it requires at least 20 MHz of spectrum to provide a viable service to the public, the Commission has never found that AMSC -- or any other MSS provider -- requires or should be guaranteed 20 MHz of spectrum.

FIFTH, the Commission should not penalize spectrum-efficient MSS systems by awarding an outmoded MSS system -- AMSC -- with any additional bandwidth. While AMSC claims to be an efficient system, it can support this claim only by comparing itself with Inmarsat, one of the least efficient MSS systems in operation. Lockheed Martin clearly demonstrates that today's MSS systems are 20 times or more efficient than AMSC's antiquated satellite architecture.

^{1f} Aeronautical Radio v. FCC, 928 F.2d 428, 451 (D.C. Cir. 1991).

SIXTH, as several commenters explain, since the Commission first expressed its concern that AMSC would be unable to coordinate sufficient spectrum with other users, the U.S. has reached a coordination agreement that will allow for dynamic coordination of spectrum in the L-band based upon actual usage. With this coordination agreement in place, there is no justification for assigning AMSC additional spectrum at this time.

FINALLY, Motorola and Iridium oppose any suggestion that the lower L-band should be reserved exclusively for geostationary MSS operations. The Commission has never concluded that NGSO and GSO systems cannot share the upper or lower L-band. It should not now authorize one or the other system architecture in the band on an exclusive basis. As the Commission realizes, global MSS spectrum is scarce and its newly-allocated "generic" MSS service should be available for a variety of users and uses.

Rather than granting exclusive access to the lower L-band to AMSC, the Commission should take this opportunity to fashion eligibility rules and operating standards that ensure equitable access to this "generic" MSS spectrum by multiple entities who can demonstrate efficient use of this scarce resource.

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Motorola Satellite Communications, Inc. ("Motorola") and Iridium LLC (formerly Iridium, Inc.) ("Iridium") submit these reply comments in reply to the initial comments submitted in response to the Notice of Proposed Rule Making in the above-captioned proceeding.^{1/} Other than AMSC and COMSAT, no one supports the Commission's proposed amendment to AMSC's current license to the extent it authorizes AMSC to operate exclusively in the lower L-band (1525-1544 MHz and 1626.5-1645.5 MHz bands) and to exclude competing applications.^{2/}

^{1/} Notice of Proposed Rule Making in I.B. Docket 96-132 (rel. June 18, 1996) ("L-band Assignment Notice")

^{2/} Motorola and Iridium are interested parties to this proceeding as Motorola has been licensed to use 5.15 MHz of spectrum at 1621.35-1626.5 MHz to provide Big

(continued ...)

Contrary to AMSC's contention, there is no precedent for the Commission to apply Section 316 of the Communications Act of 1934, as amended, to assign newly-allocated spectrum to only one licensee through a modification of its license. Moreover, the Commission's proposed action would extend its prior "non-competitive" assignment of spectrum to AMSC that the D.C. Court of Appeals has previously refused to sanction. Contrary to the court's admonition, the Commission has not demonstrated compelling factors for rejecting competitive assignment methods (e.g. hearings) when more than one qualified entity seeks access to spectrum.

Motorola also agrees with the overwhelming majority of commenters who oppose the Commission's tentative decision to assign AMSC up to 28 MHz of additional spectrum on competitive grounds. Instead of manipulating its procedural rules in a way to foreclose competition from other qualified MSS applicants the Commission should make this spectrum available to all eligible companies who wish to compete with AMSC to provide both domestic and international MSS service to the public.

The vast majority of comments support Motorola's contention that certain assumptions the FCC made in 1985 are no longer valid. For example, MSS providers no longer require at least 20 MHz of spectrum to provide a viable service to the public. While AMSC's technical design may require 20 or more megahertz, second-generation MSS providers are far more spectrum-efficient.

^{2/} (... continued)

LEO MSS services in the United States and throughout the world via the IRIDIUM[®] System. See In re Application of Motorola Satellite Communications, Inc. for Authority to Construct, Launch and Operate a Low Earth Orbit Satellite System in the 1616-1626.5 MHz Band, Order and Authorization, 10 FCC Rcd 2268 (Int'l Bureau, 1995); recon. denied, Memorandum Opinion and Order, FCC 96-279 (rel. June 27, 1996).

The Commission should therefore rethink its tentative decision to award AMSC preferred access to the lower L-band spectrum. Instead, it should take this opportunity to fashion eligibility rules and operating standards that ensure all qualified entities with equitable access to "generic" MSS spectrum.

I. THE COMMISSION MAY NOT PROVIDE AMSC WITH EXCLUSIVE ACCESS TO NEWLY-ALLOCATED "GENERIC" MSS SPECTRUM

The Commission's modification authority under Section 316 of the Communications Act of 1934 cannot be read to allow the grant of additional spectrum to AMSC. The Commission is attempting to provide AMSC with a new "unqualified right," not amending an existing right, by granting it a non-competitive assignment in the lower L-band. Limiting eligibility to the lower L-band by rule to AMSC, rather than allowing competitive access to this band, is contrary to the statutory requirement that the Commission follow comparative procedures, if necessary, when making spectrum assignments. The Commission has not demonstrated compelling reasons for deviating from comparative evaluation of applications for MSS spectrum otherwise allocated for multiple users and uses.

A. SECTION 316 OF THE COMMUNICATIONS ACT DOES NOT AUTHORIZE THE COMMISSION TO PROVIDE LOWER L-BAND FREQUENCIES TO AMSC'S EXISTING AUTHORIZATION

The Commission has proposed adding lower L-band frequencies to AMSC's existing license pursuant to the Commission's authority under Section 316 of

the Communications Act.^{3/} Section 316, however, does not provide the Commission with the legal authority to add this spectrum to AMSC's license. As L/Q Licensee has accurately pointed out, this section cannot be used by the Commission to "bootstrap AMSC's premature application."^{4/} The case law interpreting Section 316 demonstrates that it only extends to modifications of an existing right previously granted to a permittee or licensee.^{5/}

AMSC cannot claim an existing right to the lower L-band. The lower L-band was not part of AMSC's original authorization, and as a result, AMSC does not have an existing right to this spectrum. Accordingly, the Commission cannot exercise legal authority under Section 316 to add spectrum to AMSC's existing MSS authorization. Further, the Supreme Court has interpreted "modify" as used elsewhere in the Communications Act of 1934 to mean "change moderately or in minor fashion."^{6/} Licensing up to 28 MHz of additional spectrum to AMSC's upper L-band MSS license would appear to push the reasonable boundaries of the word "modification" as used in

^{3/} 47 U.S.C. § 316.

^{4/} Comments of L/Q Licensee, Inc. and Opposition to Proposed Modification of License (September 3, 1996)("Loral Comments").

^{5/} P&R Temmer v. Federal Communications Commission, 743 F.2d 918, 927-28 (D.C. Cir. 1984). See also Music Broadcasting Co. v. Federal Communications Commission, 217 F.2d 339, 342 (D.C. Cir. 1954)(declining to apply Section 316 where licensee did not have an "unqualified" right to operate before sunrise as part of its original authorization); WBEN v. US, 396 F.2d 601, 619-20 (2nd Cir. 1968).

^{6/} MCI Telecommunications Corp. v. American Tel. & Tel. Co., 114 S.Ct. 2223, 2229-30 (1990)(reasoning that it would not be fair to say that "the French Revolution 'modified' the status of the French nobility").

Section 316. Accordingly, the Commission cannot rely on Section 316 to assign the lower L-band to AMSC on an exclusive basis.

B. THE COMMISSION HAS NOT DEMONSTRATED COMPELLING REASONS FOR DEPARTING FROM THE COMPARATIVE CONSIDERATION OF APPLICATIONS

Contrary to AMSC's claim, there is not "ample authority" for the Commission's award of spectrum to only one entity when other potential providers have expressed interest in offering the service.⁷¹ Motorola agrees with the Rural Telecommunications Group that the Commission has exceeded its legal authority by permitting AMSC unfettered access to spectrum allocated for generic MSS use.⁷² The cases cited by AMSC and the Commission to support this extraordinary spectrum giveaway to AMSC are wholly inapposite. Moreover, the D.C. Circuit's prior decisions regarding AMSC's current monopoly position in the upper L-band indicate that the Commission has an almost insurmountable burden when it chooses to resolve mutually exclusive situations through other than comparative means.⁷³ In short, there is no

⁷¹ AMSC Comments at 7.

⁷² Comments of Rural Telecommunications Group at 3-7.

⁷³ Motorola and Iridium recognize that the Commission is not yet actually faced with a mutually exclusive situation because the Commission has yet to allow other applicants the opportunity to file competing applications. Instead, the Commission has, through its ongoing freeze on all MSS applications in these bands, created an artificial situation whereby AMSC's application is now before it as a "singleton." As the Rural Telecommunications Group notes, several parties to these proceedings have expressed an interest in submitting applications in these bands once the Commission lifts its freeze. Comments of Rural Telecommunications Group at 5 n.9. "The reason why the proceeding does not involve [the hearing rights] of eligible new applicants is because the Commission has refused to permit any entity other than AMSC to file for

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support for the Commission to act by rule to limit the eligibility for newly-allocated spectrum to just one company.

AMSC first claims that a recent non-competitive spectrum assignment to it supports the Commission's current proposal to give it preferred access to the lower L-band. The Commission has previously amended AMSC's authorization to provide only distress and safety operations in 2 MHz of spectrum in the lower L-band consistent with AMSC's provision of these services in the upper L-band. However, the Commission concluded that it did not intend to accept other applications "for a regularly authorized MSS satellite system" until it had completed its "generic" MSS allocation proceeding.¹⁰ The Commission then characterized the remainder of AMSC's application to construct, launch and operate in the lower L-band -- apart from its request to provide safety and distress services -- "tantamount to a new application for construction authority under Section 309."¹¹ The Commission then concluded that it would consider AMSC's "regular" application only when it determines licensing policies

¹⁰ (... continued)

these frequencies." Id. The Commission cannot use a filing freeze as an expedient for avoiding mutually exclusive situations. Aeronautical Radio v. FCC, 928 F.2d 428, 450 (D.C. Cir. 1991) citing Kessler v. FCC, 326 F. 2d 673, 687-688 (D.C. Cir. 1963) ("We have concluded that those [applicants] who tendered applications which are, or become, in fact mutually exclusive with an application pending on [the date of the freeze] or one accepted for filing since that date, are entitled to participate in a comparative hearing on that application under the Ashbacker case. . ."); See, also, Neighborhood TV v. FCC, 742 F.2d 629, 637-638 (D.C. Cir. 1984) (Freeze affected the applicant's ultimate interest in receiving an FCC license only incidentally; freeze in no way limited or precluded the applicant from competing for a license along with other qualified applicants).

¹⁰ Application of AMSC Subsidiary Corporation to Modify Space Station Authorizations in the Mobile Satellite Service, 8 FCC Rcd 4040 ¶ 37 (1993).

¹¹ Id. at ¶ 41.

for the band, granting AMSC only a Section 319(d) waiver to construct at its own risk.^{12/} Thus, AMSC is citing as established precedent an application that the Commission previously rejected as premature.

In the expanded AM band proceeding also cited by AMSC, the Commission limited initial eligibility for the approximately 200 additional spectrum assignments to the 5,000 existing AM licensees.^{13/} There, the Commission established eligibility criteria for determining which among the 5,000 licensees would be permitted to migrate to the new spectrum.^{14/} This migration to new spectrum was only one part of three elements employed by the Commission to reduce congestion in the AM band. Notably, migration to the new bands was limited to existing AM stations "which significantly contribute to congestion and interference in the band."^{15/} The Commission then emphasized that its eligibility limitations were intended to redress the unique technical problems in the AM service, not to suggest "any generalized Commission policy favoring existing licensees over new entrants in other services where new or expanded opportunities may arise."^{16/} Here, AMSC is confusing a policy with broad applicability for an entire radio service with the instant proposal intended to limit access to only one licensee in bands allocated for "generic" MSS operations.

^{12/} Id. at ¶ 41-42.

^{13/} Review of Technical Assignment Criteria for the AM Expanded Band, Report and Order, 6 FCC Rcd 6273, 6306-6307 (1991).

^{14/} Id.

^{15/} Id. at 6276.

^{16/} Id.

Likewise, the cellular decision cited by AMSC involved the allocation of spectrum ultimately to be used by hundreds of licensees, not the assignment of spectrum by rule to only one entity.^{17/} Notably, therein the Commission made the newly-allocated spectrum available to both existing and future licensees.^{18/} In this proceeding, however, the Commission is considering taking spectrum that it has recently allocated for "generic" MSS and making only one entity -- AMSC -- eligible to provide the service.

These decisions underscore AMSC's and the Commission's mistaken reliance on the Supreme Courts' Storer and Ashbacker decisions for the proposition that the Commission may forego comparative review of applicants by limiting eligibility for spectrum by rule to just one entity. The Ashbacker Court found that mutually exclusive applicants are entitled to comparative consideration subject to meeting all procedural rules.^{19/} Subsequently, in Storer the Court found that the Commission could promulgate general rules that limit the basic eligibility of entities who would otherwise be eligible for comparative consideration.^{20/} Neither case concludes that the Commission may, by rule, limit eligibility for new spectrum to a single entity.

^{17/} Amendment of Parts 2 and 22 of the Commissions' Rules Relative to Cellular Communications Systems, Report and Order, 2 FCC Rcd 1825 (1986).

^{18/} Id. at 1828.

^{19/} Ashbacker Radio v. FCC, 326 U.S. 332, 333 (1945).

^{20/} Storer Broadcasting v. FCC, 351 U.S. 192, 202 (1955) ("We do not read the hearing requirements, however, as withdrawing from the power of the Commission the rulemaking authority necessary for the orderly conduct of its business").

This limitation on the Commission's rulemaking power was expressly recognized by the D.C. Circuit when it rejected the Commission's rule limiting access to MSS spectrum only to entities agreeing to join the consortium leading to the creation of AMSC. Extending the very same consortium's reach to new spectrum by rule without permitting the comparative consideration of competing applications is equally violative of Section 309 of the Communications Act.

In Aeronautical Radio v. FCC,^{21/} the court reviewed a Commission rule that mandated that all competing applicants join a consortium (ultimately named AMSC) as a condition for maintaining eligibility to receive a MSS license. Contrasting the Commission's adoption of technical rules in another proceeding that obviated mutually exclusive applications, the court distinguished the Commission's rule from the allowable Ashbacker and Storer standards.

[I]n Telocator, the Commission established rules for all licensees; here, the Commission established the licensee itself by rule. There is no suggestion in Telocator that the no hearing, open access policy violated Ashbacker; this is so because, in Telocator, there were no mutually exclusive applications for licenses. In Telocator, the Commission was prepared to approve any individual license application, as long as the applicant conformed with the technical coordination plan ultimately chosen. The Commission..... represented that no applicants would be precluded from obtaining a license as a result of its choice of coordination methods.^{22/}

Like the eligibility rule the Commission proposes in the instant proceeding, which would limit lower L-band access to AMSC, the mandatory consortium

^{21/} Aeronautical Radio v. FCC, 928 F 2d 428 (D.C. Cir. 1991).

^{22/} Id. at 451 (emphasis added).

rule rejected by the court in Aeronautical Radio "precluded applicants from processing their individual applications at all... [b]ecause of the Commission's rule, no individual applicant was granted the opportunity to demonstrate that its individual application would be superior...."^{23/} The court therefore restricted the Commission's ability to set rules that limit eligibility for comparative treatment of applications.

Even giving the Commission the full benefit of the doubt, it would appear that the agency is acting only at the periphery of its authority in adopting a rule which eliminates mutual exclusivity through the simple expedient of prohibiting license applicants from pursuing their individual applications At a minimum, we believe any such departure from the statutorily prescribed and judicially recognized practice of resolving mutually exclusive applications through comparative hearings must be premised on some truly compelling grounds that are special to the particular proceeding[O]therwise, the Commission could impose a consortium requirement in every license proceeding involving multiple applicants, rendering the comparative hearing requirement a nullity.^{24/}

The court has yet to determine the exact scope of the "compelling grounds" that would justify departure from the comparative consideration of applications. However, the court's ongoing dissatisfaction with the consortium requirement strongly suggests that the Commission bears the heavy burden of justifying deviations from the comparative process.^{25/}

^{23/} Id.

^{24/} Id. at 452.

^{25/} To date, the Commission has not demonstrated to the courts' satisfaction that an exclusive grant to a consortium is lawful, let alone a rule reserving additional spectrum for that very same consortium. Following remand to the Commission, the court again

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In the instant proceeding, the Commission has characterized the situation as one of "unprecedented circumstances" that it believes justifies exclusion of competing applications.^{26/} These circumstances include the Commission's belief that a GSO MSS system requires 20 MHz of spectrum; the fact that AMSC has launched one satellite and is therefore in the best position to provide MSS; and the need to insure that licensees have a reasonable expectation that international coordination will not jeopardize their systems.^{27/}

The comments in this proceeding have, to a large degree, shown that the Commission's concerns in this regard have been alleviated or are overstated.^{28/} Moreover, these concerns do not reach the compelling level of those previously rejected by the court in Aeronautical Radio.^{29/}

C. THE COMMISSION SHOULD NOT USE A PROCEDURAL ARTIFICE TO AVOID ITS LONG-STANDING POLICY OF PROMOTING COMPETITIVE PROVISION OF SATELLITE SERVICES

The Commission should not maintain its partial freeze on applications to operate in the lower L-band to the advantage of AMSC. As Motorola, Iridium and

^{26/} (... continued)

addressed the consortium rule, but issued no decision on the merits. Aeronautical Radio v. FCC, 983 F.2d 275 (D.C. Cir. 1993) (noting that its decision should not be read as support for the Commission's "dubious" use of a consortium to bypass comparative hearings).

^{28/} L-Band Assignment Notice at ¶ 24.

^{27/} Id. at ¶ 12-14.

^{28/} See in general, Comments of L/Q Licensee and Lockheed Martin.

^{29/} See Aeronautical Radio, 928 F.2d at 452.

others have repeatedly noted, any consideration of AMSC's application to operate in these bands -- without first soliciting competing applications -- is premature and anticompetitive.^{30/} Moreover, the Commission will violate its own freeze order by taking any action on the AMSC application. Just as importantly, limiting access in the lower L-band to AMSC contradicts the Commission's successful policy of providing the public with a choice of multiple satellite service providers.

L/Q Licensee correctly points out that the Commission's consideration of AMSC's application violates the express terms of the freeze on MSS applications imposed by the Commission in 1990. In its lower L-band Notice, the Commission stated that "we do not intend to accept applications for a permanent MSS system to use this band...until the allocation proposals contained herein are finalized."^{31/} Clarifying its intention further, the Commission explained that "[w]e will not solicit applications to operate the service until rules and policies are finalized."^{32/} As L/Q Licensee notes, since that time the Commission has never acted to lift the freeze, to finalize its rules and policies for use of the band, or to solicit applications.^{33/} Therefore, any action on AMSC's application clearly would be premature.

Precipitous action on AMSC's application would also undermine the Commission's stated purpose in allocating spectrum for a generic MSS band and

^{30/} See, e.g., Motorola Comments at 12-14.

^{31/} Amendment of Part 2 of the Commission's Rules to Allocate Spectrum for Mobile-Satellite Service in the 1530-1544 MHz and 1626.5-1645.5 MHz Bands, Notice of Proposed Rulemaking, 5 FCC Rcd 1255, 1262 n.23 (1990) ("Lower L-band Notice")

^{32/} Id. at 1259.

^{33/} L/Q Licensee Comments at 13.

contravene its general policy of promoting competition in the provision of satellite services. When the Commission allocated this spectrum for generic MSS in 1993, it stated that this allocation would be available for a wide variety of purposes and users:

We proposed this allocation for generic MSS, rather than the more limited land mobile-satellite service (LMSS) that had been adopted internationally at the 1987 World Administrative Radio Conference (MOB-87), to provide flexibility to new satellite service providers in developing systems designed to meet the needs of all mobile users. We observed that a generic MSS allocation in these bands would be consistent with our treatment of the adjacent bands and permit operation by the aeronautical mobile-satellite service (AMSS), the MMSS and the LMSS.^{34/}

Contrary to this stated goal, the Commission now intends to open the generic MSS band to only one company using outmoded technology that offers only domestic MSS service to the public.

While AMSC asks the Commission to believe that it is the only U.S. company able to use this spectrum and serve the United States, this is no longer the case.^{35/} As the Commission is well aware, four companies have formally expressed an interest in using the lower L-band for both domestic and global MSS services and it is likely that more would file applications if the Commission were to lift its freeze.^{36/}

^{34/} First Report and Order and Further Notice of Proposed Rule Making, 8 FCC Rcd 4246 (1993) (emphasis added); See, also, lower L-band Notice at 1257.

^{35/} AMSC Comments at 6; See Aeronautical Radio, 928 F.2d at 452.

^{36/} Amendment of Part 2 of the Commission's Rules to Allocate Spectrum for Mobile-Satellite Service in the 1530-1544 MHz and 1626.5-1645.5 MHz Bands, Second Report and Order, 10 FCC Rcd 7305, 7306 (1995).

Motorola's IRIDIUM® System is but one of the entities that has a pressing need for additional spectrum to provide global MSS services.

Motorola agrees wholeheartedly with L/Q Licensee that the Commission should continue its "open skies" policy of promoting a competitive market for satellite services. This policy has proven successful in the Big LEO MSS Service, Little LEO MSS Service, the Direct Broadcast Satellite Service, the Domestic Fixed-Satellite Service, and the International Satellite Service.^{37/}

The Commission has identified no compelling reason for not extending this successful formula to the generic MSS bands. Indeed, as Lockheed Martin aptly explains, the decision to provide AMSC with monopoly access to the L-band may have been valid ten years ago due to the state of satellite technology, but "enormous advances" in satellite technology have made it possible for several MSS systems to co-exist where only one could previously operate.^{38/} Like Lockheed Martin, Motorola and Iridium support the Commission's efforts to ensure that international coordination does not undermine the viability of licensed U.S. systems; but it is "equally critical for the FCC to allocate spectrum in the L-Band in a manner that reflects current technological developments, including the ability of multiple parties to operate in these MSS frequency bands."^{39/} The Commission should reevaluate its tentative decision to provide an inefficient system with non-competitive access to even more spectrum. The

^{37/} L/Q Licensee Comments at 3-4. See, also, Opposition of Radio Satellite Corporation at 5.

^{38/} Lockheed Martin Comments at 11-12.

^{39/} Id. at 12.

Commission can continue its "open skies" policy by allowing second generation MSS systems access to the Lower L-band.

II. THE COMMISSION NEED NOT ENSURE THAT AMSC HAS ACCESS TO UP TO 28 MHZ OF SPECTRUM

Underlying the Commission's current proposal is its mistaken belief that AMSC requires at least 28 MHz of fully-coordinated spectrum to operate a viable GSO MSS system. As the initial comments indicate, the Commission has never previously reached such a conclusion. Moreover, both second generation GSO and NGSO MSS systems have the capability to operate in far less than 28 MHz of spectrum and the Commission has recognized this fact in its subsequent Big LEO authorizations. In addition, the concerns that the Commission has expressed over AMSC's ability to coordinate sufficient spectrum apparently have been resolved by a subsequent coordination agreement.

A. THE COMMISSION HAS NEVER FOUND THAT AN MSS SYSTEM REQUIRES EVEN 20 MHZ OF SPECTRUM TO REMAIN VIABLE

AMSC incorrectly states that the Commission's development of its MSS licensing policy was based on the Commission's conclusion that a viable MSS system required a minimum of 20 MHz of spectrum to maintain a viable system.⁴⁹ As Motorola and Iridium explained in their initial comments, the Commission has never made a determination as to how much spectrum is necessary for a particular system, only that 20 MHz "will be needed over the long term in order to allow development of multiple

⁴⁹ AMSC Comments at 2

services and efficient use of spectrum in this service as a whole.^{41/} Lockheed Martin and L/Q Licensee agree that there has never been a finding that AMSC -- or any MSS operator -- requires or should be guaranteed access to 20 MHz of spectrum.^{42/} CELSAT further points out that, even if the Commission believes AMSC requires 20 MHz of spectrum to remain viable, there is then no justification for ensuring AMSC access to the 28 MHz in its original grant.^{43/}

B. PROVIDING AMSC WITH PREFERRED ACCESS TO THE LOWER L-BAND WOULD PUNISH MORE EFFICIENT SECOND GENERATION MSS SYSTEMS

Allowing AMSC non-competitive access to up to 28 GHz of spectrum in the Lower L-Band is clearly inconsistent with the Commission's determination as to how this spectrum should be allocated. Moreover, this grant would reward a licensee for using inefficient technology while harming potential providers of spectrum efficient technologies.^{44/}

^{41/} Motorola Comments at 8 (citing MSS Allocation Report and Order, 4 FCC Rcd 6016, 6019 (1989)).

^{42/} Lockheed Martin Comments at 7; L/Q Licensee Comments at 6.

^{43/} CELSAT Comments at 6-7.

^{44/} As Motorola and Iridium explained in their comments, the Commission established two factors for evaluating the spectrum requirements of an MSS system: (1) the number and kind of services proposed; and (2) the degree to which spectrum efficiency is incorporated. Motorola Comments at 8 (citing 1985 MSS Notice at ¶ 10). Rather than applying an a priori spectrum assignment to AMSC that is based on dated estimates, the Commission should, at a minimum, apply these factors in light of AMSC's operational experience and changes in satellite technology.

AMSC suggests that it is an efficient user of spectrum and thus deserving of protection for its original spectrum assignment.^{46/} However, AMSC makes this efficiency claim by comparing its operations to Inmarsat, a notoriously inefficient user of spectrum. Lockheed Martin correctly exposes the shallowness of AMSC's efficiency claims. According to Lockheed Martin, its GSO "AGeS" System may be up to 20 times more efficient than AMSC's System due to AGeS's extensive reliance on frequency reuse, while AMSC uses only marginal frequency reuse.^{46/} As Lockheed concludes:

By implementing current MSS technologies, viable MSS systems can operate profitably with much less than 20 MHz of total spectrum. Indeed, 5 MHz of spectrum can now support up to 16,000 simultaneous simplex circuits, and 10 MHz of spectrum can support this number of full duplex circuits.^{47/}

The Commission should not lock-in the use of a first generation satellite architecture in the lower L-band created prior to the last decade marked by tremendous changes in satellite technology and efficiency.^{48/} As Lockheed Martin suggests, at a minimum the Commission should require AMSC to rejustify its claim for 28 MHz and explain why it is unable to use new ground and space segment technologies that would limit its need for scarce MSS spectrum.^{49/}

^{45/} AMSC Comments at 6.

^{46/} Lockheed Martin Comments at 7-8.

^{47/} Id. at 9.

^{48/} See L/Q Licensee Comments at 10.

^{49/} Lockheed Martin Comments at 9-10.

C. THE RECENT L-BAND COORDINATION AGREEMENT RELIEVES AMSC OF THE SPECTRUM SHORTAGE CONCERNS JUSTIFYING ITS RIGHT TO EXCLUSIVE ACCESS

At the core of the Commission's proposal to grant AMSC preferred access to the lower L-Band is the Commission's belief that "the U.S. will not be able to secure sufficient spectrum in the upper L-band" for AMSC.^{50/} As the comments indicate, this concern is not justified.^{51/} One week after the Commission released its L-band Assignment Notice, the Commission announced that it had reached a coordination agreement regarding the L-Band with Canada, Mexico, Inmarsat and the Russian Federation.^{52/} Although the Commission has not released the full text of this Memorandum of Understanding, the Commission states that "[s]pectrum allocations to individual operators will be reviewed annually on the basis of actual usage and short term projections of future need."^{53/} This "dynamic allocation," as L/Q/Licensee characterizes it, is consistent with the Commission's original proposal to assign MSS spectrum based upon the number and kind of services proposed by an operator.^{54/}

In light of this agreement, the Commission should reevaluate the need to award AMSC privileged access to all 28 GHz of spectrum in the lower L-band. Now,

^{50/} L-band Assignment Notice at ¶ 9.

^{51/} See L/Q Comments at 6-7; CELSAT America Comments at 4-5; COMSAT Comments at 2-3.

^{52/} Report No. 96-16, released June 25, 1996. "FCC Hails Historic Agreement on International Satellite Coordination."

^{53/} Id.

^{54/} See 1985 MSS Notice at ¶ 10. COMSAT characterizes the agreement as one that "will be based largely on actual usage of each system." COMSAT Comments at 3.

other than the fact that AMSC's original license authorized its use of 28 MHz, the Commission has no justification for approving this extraordinary spectrum giveaway to AMSC.

D. THE COMMISSION SHOULD NOT LIMIT THE USE OF THE LOWER L-BAND TO GEOSTATIONARY MSS SYSTEMS

The Commission should not limit use of the lower L-band to GSO satellite systems. These GSO Systems provide limited national coverage, negating the promise of global MSS operations in bands allocated internationally for this purpose.

As Motorola, Iridium and other parties indicated in their comments, the Commission should not blindly provide inefficient systems with additional MSS spectrum.^{56/} GSO systems, including AMSC, have the inherent limitation on their service areas that make them inefficient users of the spectrum allocated for MSS use. The promise of NGSO MSS Systems is their ability to provide service to customers almost anywhere on the globe.^{57/} As the Commission is aware, there is a shortage of spectrum allocated for global MSS use.^{57/} Therefore, lower L-band spectrum should not be reserved exclusively for GSO systems with limited national reach. Such a restriction would impede the introduction of innovative NGSO systems in the bands that the Commission has reserved for generic MSS uses of all kinds.

^{56/} Motorola Comments at 10-12; Lockheed Martin Comments at 13-15; L/Q Licensee Comments at 7, 9-10.

^{56/} See Big LEO Allocation Order, 9 FCC Rcd 536, 539 (1994).

^{57/} See, e.g., L/Q Licensee Comments at 10-11.

Contrary to AMSC's assertion, the Commission has not concluded that NGSO and GSO systems cannot exist in the L-band without causing harmful interference.^{58/} While the Commission reached that tentative conclusion for the upper L-band in 1992,^{59/} it subsequently changed its position on sharing in its final AMSC decision.^{60/} AMSC itself has argued in another proceeding that its GSO system could share spectrum with NGSO systems.^{61/}

In other instances, such as its Big LEO decision, the Commission has not foreclosed the joint use of MSS bands by both GSO and NGSO systems.^{62/} In its recently adopted 28 GHz proceeding, the Commission also recognized that NGSO and GSO systems can share spectrum under certain circumstances.^{63/} Similarly, the Commission should not foreclose the possibility that NGSO MSS systems, with their global reach and advanced technologies, could operate in the lower L-band.

^{58/} AMSC Comments at 6 referring to L-band Assignment Notice at n.29

^{59/} AMSC Tentative Decision, 6 FCC Rcd 4900, ¶ 59 (1991).

^{60/} AMSC Final Decision, 7 FCC Rcd 266, 272-273 (1992).

^{61/} Letter from Lon Levin to the Chief, Common Carrier Bureau, CC Docket No. 92-166 (December 3, 1993).

^{62/} Amendment of the Commission's Rules to Establish Rules and policies Pertaining to a Mobile Satellite Service in the 1610-1626.5/2483.5-2500 MHz Frequency Bands, Report and Order, 9 FCC Rcd 5936, 5946 (1994), See also Memorandum Opinion and Order on reconsideration, 2 C.R. 673 (1996).

^{63/} Rulemaking to Amend Parts 1, 2, 21 and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate to the 29.5-30.0 GHz Frequency Band to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services, First Report and Order and Fourth Notice of Proposed Rulemaking, FCC 96-311 (rel. July 22, 1996) (61 F.R. 44177, August 28, 1996).