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

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

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| In the Matter of | ) | |
| | ) | |
| Improving Public Safety Communications in the 800 MHz Band | ) | |
| | ) | IB Docket No. 01-185 |
| Consolidating the 900 MHz Industrial/Land Transportation and Business Pool Channels | ) | |

To the Commission:

**COMMENTS OF IRIDIUM SATELLITE LLC**

Iridium Satellite LLC ("Iridium") hereby responds to the Notice of Proposed Rulemaking ("NPRM") released by the Commission in the above-captioned docket.[1]

## I. INTRODUCTION

The NPRM's primary focus is on fashioning a remedy for the substantial interference and spectrum congestion problems suffered by various public safety licensees operating in portions of the 800 MHz band.[2] It is clear that a solution to this problem must be found. It is equally clear that solving the problem by assigning 10 MHz of reserved 2 GHz MSS spectrum to Nextel Communications, Inc. ("Nextel") is not essential to a resolution of the public safety community's problems, and that doing so would put at risk the future of a competitive MSS industry. As is demonstrated below, there is, quite simply, no public interest rationale that supports Nextel's request for special dispensation.

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[1] FCC 02-81, released March 15, 2002.

[2] See NPRM at 29-32 &n.149.

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## II. DISCUSSION

In November 2001, Nextel submitted a "White Paper" to the Commission, ostensibly proposing a remedy for various problems confronting 800 MHz public safety licensees.[3] In reality, of course, the White Paper was intended to open a new front in Nextel's ongoing effort to obtain access to free nationwide spectrum in the 2 GHz MSS band. This effort was initiated in March 2001 by Nextel's affiliate, New ICO Global Communications (Holdings) Ltd. ("ICO"), with the latter's request to the Commission that it be permitted to use its licensed 2 GHz MSS spectrum for the provision of what ICO characterized as "ancillary" terrestrial services.[4] Not surprisingly, this proposal generated a firestorm of opposition from, inter alia, terrestrial CMRS providers who compete with Nextel, who saw ICO's proposal for what it was, a barely concealed attempt by Nextel to obtain that which it has been unwilling or unable to obtain by purchase in the secondary market or at auction: access to nationwide broadband spectrum.

The White Paper simply dresses up the ICO proposal in new clothes, offering a different "public interest" rationale. The ICO Letter sought access to a minimum of 7 MHz in the 2 GHz MSS band (its MSS system's specified home spectrum) for an "ancillary terrestrial component" ("ATC"), through which Nextel can provide nationwide terrestrial services on new, free spectrum.[5] The quid pro quo offered by ICO in return for this special relief is that, if

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[3] "Promoting Public Safety Communications" (Nov. 21, 2001).

[4] See Letter from Lawrence H. Williams and Suzanne Hutchings to Chairman Powell in IB Docket No. 99-81, dated March 8, 2001 ("ICO Letter").

[5] In reality, of course, grant of ICO's request would afford Nextel unfettered, free access to essentially the entire licensed 2 GHz MSS band (*i.e.*, approximately 50 MHz), because ICO's is the only 2 GHz MSS system that can launch in the near term. Under the 2 GHz MSS service rules, ICO can operate across the entire band until another system enters service, which will not be for several years at the earliest.

granted, ICO will deploy its MSS system; without this ATC authority, ICO threatens to scrap its MSS plans altogether.[6]

In the White Paper, Nextel proposes that it receive 10 MHz of reserved 2 GHz MSS spectrum, in return for its cooperation in resolving at least some of the public safety licensees' problems in the 800 MHz band. In brief, what Nextel/ICO seek is exclusive terrestrial access to a minimum of 17 MHz (and, de facto, to upwards of 60 MHz, at least for the next several years) of nationwide spectrum in the 2 GHz band, without the inconvenience of an auction. As demonstrated below, this would have a potentially devastating impact on other MSS licensees, particularly the other 2 GHz licensees.

On July 17, 2001, the Commission granted a series of licenses for new MSS systems, to be operated in the 2 GHz band. These licensees rapidly are approaching the first of their respective due diligence milestones -- entering into a noncontingent satellite construction contract by July 17, 2002. As the Commission is well aware, the current economy is not conducive to multibillion-dollar investments in long-term telecommunications projects that will not provide any return on investment, let alone a profit, for many years. In these difficult circumstances, a Commission decision that would grant the Nextel/ICO combine free access to approximately 60 MHz of nationwide 2 GHz MSS spectrum for the delivery of terrestrial service would create a huge disincentive for investment in other 2 GHz MSS systems.

Because its 2 GHz MSS constellation already is constructed, ICO is able to enter service years earlier than any other 2 GHz MSS licensee. Coupling this headstart with Nextel's financial, technical and marketing capability will leave other 2 GHz licensees facing a competitive landscape unattractive to new investors. To compete with ICO/Nextel, not only will a multibillion dollar satellite system have to be constructed and deployed, spectrum and

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6 See ICO Letter at 6.

financing will have to be found to compete with Nextel's nationwide terrestrial network, with no hope of even entering the market until 4-5 years after ICO/Nextel. Indeed, this scenario may prove sufficiently bleak to potential investors that ICO/Nextel could end up with permanent exclusive access to most, if not all, of the entire 2 GHz MSS band (plus the 10 MHz being sought in the instant proceeding).

In its comments in IB Docket No. 01-185, which the Commission initiated in response to ICO's ATC proposal, Iridium presented a variation on ICO's ATC scheme that would: (1) not so overwhelmingly favor Nextel/ICO vis-à-vis other MSS systems; (2) maximize the use of the 2 GHz MSS band by providing for terrestrial operations on a secondary basis; and (3) create significant incentives for partnering among MSS and terrestrial CMRS providers, to the particular benefit of Americans living in rural and other underserved areas.[7] The expeditious grant of Iridium's counterproposal in IB Docket No. 01-185 -- and the equally expeditious denial of Nextel's attempted spectrum grab in the instant proceeding -- will expedite the development of broadly competitive 3G services, to be delivered by both satellite and terrestrial systems, to all Americans, and will do no injury to the 800 MHz public safety services of concern in the instant proceeding. The 800 MHz public safety service can be "saved" without sacrificing the 2 GHz MSS licensees.

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[7] Copies of Iridium's comments in IB Docket No. 01-185 are attached hereto for convenience.

## CONCLUSION

As a result of the foregoing, Iridium requests that the Commission deny Nextel's proposal to acquire 10 MHz of 2 GHz MSS spectrum.

Respectfully submitted,

IRIDIUM SATELLITE LLC

By _____
Jeffrey H. Olson
Paul, Weiss, Rifkind, Wharton & Garrison
1615 L Street, NW
Washington, DC 20036
Telephone: 202-223-7326
Facsimile: 202-223-7420
Its Attorneys

May 6, 2002

**ATTACHMENT 1**

**Before the**
**FEDERAL COMMUNICATIONS COMMISSION**
**Washington, DC 20554**

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| In the Matter of | ) | |
| | ) | |
| Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, the L-Band, and the 1.6/2.4 GHz Band | ) | IB Docket No. 01-185 |
| | ) | |
| 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 |

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

To: The Commission

**COMMENTS OF**
**IRIDIUM SATELLITE LLC**

Iridium Satellite LLC ("New Iridium") hereby comments on the Notice of Proposed Rulemaking ("NPRM") issued in the above-captioned proceeding.[1] As the Commission is aware, New Iridium is the proposed transferee (through various affiliates) of: (1) the license for the existing Iridium "Big LEO" mobile satellite service ("MSS") system operating in the 1.6 GHz band (the "Iridium System");[2] and (2) the license issued on July 17, 2001,[3] for a new MSS system to operate in the 2 GHz band.[4]

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1 FCC 01-225, released August 17, 2001.

2 See Public Notice Report No. SAT-00070, released April 17, 2001.

3 See Iridium LLC, DA 01-1636, released July 17, 2001.

4 See Public Notice, Report No. SAT-00086, released September 28, 2001.

## I. INTRODUCTION

The requests filed by New ICO Communications (Holdings), Ltd. ("ICO") and Motient Services, Inc. ("Motient"), which gave rise to the instant proceeding,[5] have superficial appeal. All things being equal, it makes sense to afford MSS licensees the flexibility needed to better serve their customers and enhance their competitive posture, by permitting them to use their licensed spectrum to provide ancillary terrestrial services ("ATS").

But all things are not equal. As is discussed infra, there is enormous disparity in the general allocations and individual spectrum assignments among MSS operators in the L-band, 1.6/2.4 GHz band and 2 GHz band. However, even if those inequalities could be eliminated today, adoption of ICO's proposal for the 2 GHz band would not result in the public benefits proffered by ICO. Rather, the end result most likely would be the effective monopolization of the 2 GHz MSS band, and the de facto reallocation of that spectrum for terrestrial use, by ICO and its affiliate, Nextel Communications ("Nextel").

If ICO's proposal (or some close variation on that theme) is adopted, the Commission will all but ensure that few, if any, of the recently authorized 2 GHz MSS systems will ever be built. Without an existing terrestrial infrastructure and customer base (such as is possessed by Nextel) or a business plan targeting a separate market niche (and supported by deep corporate "pockets"), it is all but inconceivable that funding will be available for new MSS entrants. Potential investors will view the financial "lure" of these new entrants' ability to provide terrestrial services as wholly illusory. A successful 2 GHz MSS/ATS business plan will have to attract not only the capital to build and launch a satellite system, but to build out a terrestrial network infrastructure as well, including the development of, inter alia, dual-mode

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[5] See NPRM at ¶ 5.

handsets to operate in this new band. It is unclear why any rational investor would seek to compete against Nextel's entrenched position in this market.

Rather, potential investors will see the ICO proposal as exactly what it is: an opportunity for ICO/Nextel and no one else. Nextel will be able to acquire perhaps 50 MHz (or more) of highly valuable nationwide spectrum for its existing terrestrial network -- spectrum that will enable it to achieve a nationwide terrestrial "footprint" -- without having to compete for that spectrum at auction.[6] It will be far less expensive for ICO/Nextel to build and launch a satellite system, and operate it in some minimalist fashion (but still compliant with whatever regulations the Commission imposes on ATS operations), than it would be to compete for that spectrum at auction against other major terrestrial competitors. Giving Nextel the ability to leverage its unique incumbent terrestrial status -- to essentially monopolize the 2 GHz MSS band -- will guarantee both ICO's success (albeit perhaps not as an MSS operator) and the stillbirth of most, if not all, of its would-be competitors.

Such an outcome cannot possibly be squared with the public interest. There is, however, a solution to the problem, one that should increase the service offerings available to the public, increase the likelihood of funding for 2 GHz MSS systems, and avoid the likelihood of, de facto, awarding 50 MHz of nationwide terrestrial spectrum to ICO/Nextel for free. As is discussed in greater detail below, the solution is to create a secondary terrestrial service ("STS") allocation across all the MSS bands. In each band, multiple STS frequency blocks could be created, which would be open to all applicants, whether affiliated with an MSS licensee or not, and which would be awarded by auction in the event of mutually exclusive applications.

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[6] Those potential investors with a sense of history will see this as a variation on Fleetcall's (Nextel's original name) scheme that converted private SMR spectrum to CMRS spectrum without the inconvenience of competing applications.

## II. THE BIG LEO SYSTEMS OPERATING IN THE 1.6/2.4 GHZ BAND MUST BE AFFORDED THE SAME FLEXIBILITY AS OTHER MSS SYSTEMS.

Iridium wishes to emphasize that it is not essential to the success of the Iridium System that MSS licensees be permitted to offer ancillary terrestrial services ("ATS") of the sort discussed in the NPRM. However, assuming arguendo that the Commission finds that it is in the public interest that MSS licensees be permitted to provide ATS, possessing that regulatory flexibility then becomes critical for all MSS licensees. In that case, the Commission must ensure a level playing field for all MSS licensees, and permit the 1.6/2.4 GHz Big LEO MSS systems, such as Iridium, to provide such services.

However, as discussed in greater detail infra, competitive parity involves not only the ability, under the applicable regulatory scheme, to offer certain services, but also access to sufficient spectrum to do so. Otherwise, the "equal opportunity" for all MSS systems to provide ATS is rendered meaningless. As the Commission is aware, the existing Iridium System is required to operate both its uplink and downlink in a contiguous band of only 5.15 MHz (1621.35-1626.5 MHz). New Iridium has no doubt that, as a purely technical matter, it can operate a terrestrial signal within the existing TDMA allocation without causing interference to its satellite signal. The larger question is whether this can be accomplished in a commercially viable manner. As soon as the pending assignment of the Iridium Big LEO license is granted, New Iridium intends to seek an experimental license to pursue this matter in a more technically rigorous fashion.[7]

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[7] In the Report and Order that established the Big LEO allocations, in recognition of the severe constraints imposed only on the TDMA portion of that allocation, the Commission held out the prospect of spectrum relief for TDMA operations. See 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 Band, 9 FCC Rcd 5936, 5954-61 (1994). The time is fast

## III. THE COMMISSION SHOULD CREATE A SECONDARY TERRESTRIAL ALLOCATION IN THE MSS BANDS, OPEN TO ALL INTERESTED APPLICANTS.

The inequality with respect to access to spectrum among licensees in the L-band, the 1.6/2.4 GHz band, and the 2 GHz band is self-evident, and greatly affects even the provision of solely satellite-based services; as noted supra, redress for this problem is critical. The addition of ATS authority for MSS systems, at least along the lines proposed by ICO, will increase the impact of this inequality by orders of magnitude.

This problem is separate and distinct from the problem identified in Section I above: that adoption of ICO's ATS proposal will result in the unjust enrichment of ICO/Nextel and the de facto reallocation of the 2 GHz MSS band to terrestrial use. Fortunately, however, there is a solution which: (1) provides, for MSS licensees who deem it necessary, the flexibility to offer terrestrial services; (2) avoids exacerbating the inequality among various MSS allocations and assignments; and (3) decreases, although it does not entirely eliminate, the enormous competitive advantage already held by ICO/Nextel. The solution is to create an STS allocation in the MSS bands, open to all applicants, including MSS licensees.

As discussed in Section I above, the greatest potential danger to the public interest extant in this proceeding is the possibility that ICO/Nextel, through the guise of "saving" the MSS, will be able to appropriate for its existing terrestrial network 50 MHz or so of free nationwide spectrum. In doing so, ICO/Nextel will: (1) seriously disadvantage its terrestrial competitors, who generally must pay a hefty price for their spectrum at auction; (2) create an MSS/terrestrial juggernaut, against which no new MSS entrant may be able to compete; (3) deprive the U.S. Treasury of much needed revenue; and (4) make a mockery of the

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approaching when such relief will be necessary and appropriate. Permitting MSS systems to provide ATS will only heighten the need for such relief.

Commission's allocation process. New Iridium's STS proposal addresses each of these concerns.

Obviously, great care must be exercised in fashioning the technical rules that would govern this new STS. MSS licensees must have a high degree of comfort that their satellite services will not receive interference from co-channel terrestrial operations. The burden of noninterference must reside exclusively on the STS licensee. To the extent that the STS licensee is affiliated with the MSS licensee, the services can more easily be coordinated.

In order to provide adequate spectrum for STS operations -- including enabling the terrestrial licensee to be able to "work around" a given MSS system -- STS licenses should cover more than the bandwidth of one individual MSS system. For example, at 2 GHz, each secondary terrestrial license could cover two 7 MHz (3.5/3.5) satellite licenses. This would give the terrestrial operator 14 MHz of spectrum, including significant "upstream/downstream" separation, which should provide adequate flexibility to avoid interference to the primary MSS systems, even if both MSS systems are operational.[8] Similarly, in the Big LEO band, two STS licenses could be made available, each covering 8.25 MHz in the 1.6 GHz band and 8.25 MHz in the 2.4 GHz band.[9]

Such a solution has several regulatory and commercial virtues. First, as discussed in greater detail below, it eliminates the ability or incentive of an MSS licensee to "game" the

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[8] As the Commission is aware, not all licensed systems are built, and those that are do not use all of their bandwidth on day one; spectrum use expands with the customer base. This "ramping up" period will afford the STS licensee time to work out the more difficult technical details.

[9] It may be the case that certain MSS constellations are easier to coordinate with than others. Applicants would be able to take this into account in deciding which STS license(s) to seek. Additional factors would include whether an operating MSS system already was deployed in

system. If an MSS licensee feels the need to provide terrestrial service as a "component" of its satellite offerings, it would be free to acquire the necessary terrestrial license. Indeed, a new MSS licensee may wish to offer terrestrial services as a "precursor" to its MSS system, in order to establish a customer base and revenue stream during the construction of the satellite system. It would be free to do so under this regime.

Further, the STS solution satisfies many of the concerns raised in the Memorandum Opinion and Order and Further Notice of Proposed Rulemaking in ET Docket Nos. 00-258 et al. ("3G Further Notice"),[10] regarding identifying additional spectrum for terrestrial 3G services. The STS solution maximizes the efficiency with which the spectrum will be used, consistent with the primary MSS allocation, by permitting terrestrial operators access to the MSS bands. The STS licensees may choose to partner with one or more MSS operators, in order to facilitate coordination and expand the scope of their service (e.g., a domestic cellular operator could partner with a primary MSS operator to offer seamless global service).[11]

Finally, the STS solution eliminates the spectre facing the Commission of having to police MSS systems to ensure that they are not effecting a de facto reallocation of their MSS assignments. Much of the NPRM is dedicated to proposing a series of regulatory firewalls to prevent this, including a complex set of requirements involving, inter alia, deployment of a "full"

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a particular band, or the likelihood of a new system entering service in a given timeframe. The Commission would not have to concern itself with these marketplace factors.

[10] Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Services, FCC 01-224, released August 20, 2001.

[11] The proponents of a complete reallocation of the 2 GHz MSS band continue to press the view that only terrestrial systems will provide 3G services. Nothing could be further from the truth. The vast majority of 2 GHz MSS licensees hope to offer the same suite of advanced services as their terrestrial competitors. The STS solution will encourage joint ventures that give terrestrial operators global reach.

satellite constellation, minimum geographic satellite coverage, minimum satellite traffic loading, and the like.[12]

Putting aside the administrative resources that the Commission would have to expend enforcing such a system, no combination of restraints will prevent a given MSS licensee with a substantial incentive and capability to maximize its terrestrial service offerings from doing so. As noted supra, it is clearly in ICO/Nextel's long-term economic interests to spend a few billion dollars constructing, launching and operating a minimalist MSS constellation in order to gain free access to $30-40 billion worth of nationwide spectrum for the expansion of Nextel's existing terrestrial network. As a practical matter, the ICO satellite system will be ancillary to the Nextel terrestrial network, regulatory constraints to the contrary notwithstanding.

The STS alternative eliminates many of these problems without increasing the Commission's administrative burdens. It provides the flexibility for MSS licensees who want to provide terrestrial service, without further disadvantaging those MSS licensees whose capacity already is more limited than others. It provides access to the band for terrestrial operators without threatening the future of the MSS. It enhances the likelihood that new MSS entrants will be funded and that partnerships will be created to provide global 3G services via integrated satellite/terrestrial systems. In short, it is a win-win solution for all: MSS licensees, terrestrial operators, the Commission, and, most importantly, the public.

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[12] See, e.g., NPRM at ¶¶ 41-78.

## CONCLUSION

As a result of the foregoing, New Iridium requests that the Commission adopt the STS solution.

Respectfully submitted,

IRIDIUM SATELLITE LLC

By _____/s/_____

Jeffrey H. Olson
Paul, Weiss, Rifkind, Wharton & Garrison
1615 L Street, NW
Washington, DC 20036
Telephone: 202-223-7326
Facsimile: 202-223-7420
Its Attorneys

October 22, 2001

## CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Comments of Iridium Satellite LCC was served this 22nd day of October, 2001, by hand delivery to the FCC mail facility, Capitol Heights, MD, on the following:

The Honorable Michael Powell, Chairman
Federal Communications Commission
445 12th Street, S.W., 8-B201
Washington, DC 20554

The Honorable Kathleen Abernathy
Federal Communications Commission
445 12th Street, N.W., 8-A204
Washington, DC 20554

The Honorable Michael Copps
Federal Communications Commission
445 12th Street, N.W., 8-A302
Washington, DC 20554

The Honorable Kevin Martin
Federal Communications Commission
445 12th Street, N.W., 8-B115
Washington, DC 20554

Peter Tenhula, Esq.
Office of Chairman Powell
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Bryan Tramont, Esq.
Senior Legal Advisor
Office of Commissioner Abernathy
FCC, Room 8-A204
445 12th St., SW
Washington, DC 20554

Monica Shah Desai, Esq.
Legal Advisor
Office of Commissioner Martin
Federal Communications Commission
445 12th St., SW, Room 8-C302
Washington, DC 20554

Paul Margie, Esq.
Legal Advisor
Office of Commissioner Copps
FCC, Room 8-A302
445 12th St., SW
Washington, DC 20554

Donald Abelson
Chief, International Bureau
Federal Communications Commission
445 12th Street, N.W., Room 6-B722
Washington, DC 20554

Thomas Tycz
International Bureau
Federal Communications Commission
445 12th Street, N.W.,Room 6-A665
Washington, DC 20554

Bruce Franca
Office of Engineering & Technology
Federal Communications Commission
445 12th Street, S.W., Room 7-C153
Washington, DC 20554

Julius Knapp
Office of Engineering & Technology
Federal Communications Commission
445 12th Street, S.W., Room 7-B133
Washington, DC 20554

Thomas Sugrue
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th St., S.W., Room 3-C252
Washington, DC 20554

Kathleen O'Brien-Ham
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th St., S.W., Room 3-C255
Washington, DC 20554

Kathleen Arnold

Kathleen Arnold

**ATTACHMENT 2**

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

| | | |
|---|---|---|
| In the Matter of | ) | |
| | ) | |
| Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, the L-Band, and the 1.6/2.4 GHz Band | ) | IB Docket No. 01-185 |
| | ) | |
| 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 |

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OFFICE OF THE SECRETARY

To the Commission:

**COMMENTS OF IRIDIUM SATELLITE LLC**
**IN RESPONSE TO PUBLIC NOTICE OF MARCH 6, 2002**

Iridium Satellite LLC ("Iridium") hereby submits its comments in response to the Public Notice[1] released in the above-captioned proceedings on March 6, 2002, seeking additional information with respect to certain enumerated questions.

In essence, the Public Notice asks whether it would be technically feasible to: (1) create a new terrestrial allocation that would encompass the same spectrum as the existing MSS allocations in the 1.6/2.4 GHz "Big LEO" band, the L band, and the 2 GHz band; and (2) award the terrestrial licenses (presumably through auction) to parties not necessarily affiliated with the MSS licensee. Iridium is pleased to see these questions raised by the Commission, as this is, with two critical refinements, precisely the solution to the issues raised in these proceedings that Iridium proposed in its initial comments.[2]

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[1] Public Notice, DA 02-554, released March 6, 2002 ("Public Notice").

[2] See Comments of Iridium Satellite LLC, filed October 22, 2001, at 5-8 ("Iridium Comments").

## I. THE COMMISSION SHOULD ESTABLISH A SECONDARY TERRESTRIAL SERVICE IN ALL MSS BANDS.

At the outset, Iridium must restate its view that affording MSS licensees the opportunity to provide ancillary terrestrial services is not critical to the success of its operating or planned MSS systems. However, assuming arguendo that some provision is to be made that would introduce terrestrial operations into the MSS bands, the Commission must make that opportunity available to all licensees in all MSS bands.

It is essential that the Commission not lose sight of the paramount goal in this proceeding: to increase the scope of permissible services that can be offered by MSS systems, thereby increasing competition in the CMRS marketplace. Simply opening new spectrum for traditional terrestrial operators will not achieve, and, indeed, most likely will substantially undermine progress toward, that goal. Similarly, a policy that, de facto, would advance the interests of only one, uniquely situated, MSS system must be avoided. Rather, a policy must be fashioned that substantially enhances the likelihood that multiple current and new MSS systems can become vigorous CMRS competitors.

In its initial Comments, Iridium proposed just such a solution. Specifically, Iridium outlined the parameters of a secondary terrestrial service ("STS") allocation, to be created across all the existing MSS bands, including the 1.6/2.4 GHz Big LEO band, the L band, and the 2 GHz band. There is no question that terrestrial operations in the MSS bands -- coordinated with satellite operations -- are technically feasible; the issue is whether they can be conducted on an economically viable basis without threatening, through interference, the viability of the satellite services.

The degree of difficulty in this regard will vary among the various MSS bands, depending on, inter alia, available bandwidth, the overall nature of the sharing environment in that band, and the precise business and technical plans of the satellite operator and the terrestrial

operator. Speaking only with respect to the 1.6/2.4 GHz Big LEO band (in which Iridium operates an existing MSS system) and the 2 GHz band (in which Iridium holds a license for its second-generation MSS system), Iridium has no doubt that terrestrial services can be conducted on an economically viable basis by unaffiliated operators, while still fully protecting satellite operations.

Obviously, permitting parties unaffiliated with the satellite operator to provide the terrestrial service may theoretically complicate the coordination of the two systems. However, as Iridium demonstrated in its initial Comments, the problems are far from insurmountable, and the public interest benefits inherent in such a dual allocation scheme far outweigh those potential complications. Indeed, as detailed below, a properly crafted STS allocation can substantially enhance the overall competitiveness of multiple satellite systems.

### A. The Terrestrial Services Must Be Secondary to the MSS Allocations.

As Iridium emphasized in its initial Comments, it is critical that terrestrial operations in the MSS bands be strictly secondary to the relevant satellite systems. With respect to existing MSS systems, such as Iridium's Big LEO system, it is essential that operating MSS systems be guaranteed that they will not receive interference from new co-channel terrestrial services.

Moreover, with regard to the 2 GHz band, in which no satellite systems are yet operating, a clear "no interference" requirement is essential if the 2 GHz MSS systems are to be deployed. It must be assumed that, with the possible exception of the ICO[3] system, the yet-to-

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[3] ICO Global Communications (Holdings) Ltd. ("ICO"). As discussed in great detail in Iridium's initial Comments, this proceeding must not be permitted to result in a regulatory "solution" that is, de facto, custom tailored for only one, uniquely situated, MSS operator. The entire MSS industry must have a realistic opportunity to benefit from the Commission's action if the general public is to realize the benefits of competition and rural areas are to receive competitive mobile services.

be-constructed 2 GHz MSS systems will not be deployed prior to terrestrial systems. It would be difficult for a rational investor to spend several billion dollars to construct and launch an MSS system, knowing that the system would have to protect a previously-deployed, co-primary, ubiquitous terrestrial network, one that would be competing with the satellite system for customers.

In short, the only way to maintain the integrity of the MSS allocations is to guarantee to each satellite system that, in its assigned frequencies, it will have absolute primary status vis á vis co-channel terrestrial systems. As Iridium demonstrated in its initial Comments, this will ensure that the terrestrial operators work closely with the satellite operators; indeed, it may even encourage joint ventures or other cooperative arrangements among the two systems.

### B. Specific Frequency Assignments Should Be Made To The 2 GHz MSS Systems Now.

In order to ensure the likelihood of early and meaningful MSS/terrestrial system cooperation -- to protect against interference to the MSS systems and to provide an important measure of regulatory certainty for both the terrestrial operators and the satellite systems -- the Commission should assign specific frequencies to the 2 GHz MSS systems now, rather than wait until each satellite system is ready to launch before a "selected assignment" is made.[4] In this way, terrestrial applicants will know from the outset the identity of the corresponding primary satellite system in each terrestrial frequency block. This information may affect which blocks a given terrestrial applicant will choose to bid on, and will facilitate immediate post-auction "coordination" discussions with the appropriate satellite licensee(s).

These discussions -- the fundamental starting point of which is that the MSS system is primary and the STS system is secondary --would develop technical parameters and

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[4] See Establishment of Policies and Service Rules for the Mobile Satellite Service in the 2 GHz Band, 15 FCC Rcd 16127, 16138 (2000) ("2 GHz Service Rules").

methodologies for ensuring that the terrestrial system will not cause interference to the MSS system when the latter eventually is deployed, while still affording the STS system as much flexibility as practicable. These parameters will be very system-specific, turning on multiple aspects of both the satellite and terrestrial systems' particular designs. It is essential that the Commission facilitate this sort of early exploration of these potentially complex technical issues. This will ensure not only the proper technical integration of the two systems, but may encourage joint ventures or other integration of the parties' economic interests as well.

Critical to the success of this cooperative undertaking is that, within a given MSS licensee's specific frequency assignment, all other MSS systems must honor the agreed-upon limits on STS interference while operating in that band. Specifically, such limits must be binding on any other MSS systems that might use that portion of the band prior to the launch of the MSS system to which those frequencies have been assigned. Otherwise, an early MSS entrant would have the ability (and, obviously, the incentive) to disrupt both the operations of an existing terrestrial competitor and the long-term prospects of a competitive MSS/STS joint venture, by claiming protection in excess of that agreed to by the MSS system licensed to the portion of the band in question. The level of protection from STS interference that an early MSS entrant may seek in its own assigned frequencies is another matter. But that licensee should not be permitted to disturb an agreement covering another MSS licensee's assigned band.

Iridium acknowledges that this early assignment of frequencies to specific MSS systems runs counter to the rationale for delaying such assignments that was discussed in 2 GHz Service Rules. However, adoption of the STS plan would substantially alter the underlying premise of the Commission's earlier conclusion regarding this timing issue. As the Commission has recognized on numerous prior occasions, auctions are most successful when the bidders' knowledge of all relevant circumstances is maximized. Here, the identity of the primary satellite

licensee for a particular frequency block is a potentially critical piece of information for every party interested in the outcome of an auction for such STS licenses.

This is particularly so with respect to those 2 GHz MSS licensees who might wish to enter the auction in order to provide terrestrial services to augment their satellite-based services, and/or as a "precursor" system to develop a customer base during the lengthy satellite construction period. Without knowing now which frequencies will constitute its protected "home" spectrum, a 2 GHz MSS licensee will have no practical way of ensuring that its secondary terrestrial license will be co-channel with its satellite system.

### C. Subsidiary Technical Issues.

With regard to the subsidiary technical questions raised by the Public Notice, most are answered by imposing secondary status on the terrestrial operations. For example, a secondary terrestrial system would be no more entitled to cause interference to an adjacent channel satellite system than it would to a co-channel system. As noted supra, the precise technical requirements needed to ensure against co-or adjacent channel interference will vary widely, depending on, inter alia, the band in question (recognizing the vastly different interference environments and constraints between, e.g., the L band and the 2 GHz band) and the precise systems involved. By imposing secondary status on the terrestrial systems, the Commission ensures that the satellite systems are protected; the precise manner in which each terrestrial operator fulfills that burden can, in the first instance, be left to the parties to work out, perhaps subject to broad technical parameters established by the Commission.[5]

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[5] There is simply not enough information available with regard to various satellite system parameters (particularly the 2 GHz systems) -- let alone completely undefined terrestrial systems -- to provide precise answers to the Commission's technical questions. But by imposing the overarching secondary service requirement on the terrestrial systems, the Commission can comfortably postpone -- and, perhaps, avoid altogether -- wrestling with many of those details.

## D. Rural Services

The STS plan is the one most likely to ensure that mobile services will be provided to rural and other underserved areas. By imposing secondary status on the terrestrial licensees, the Commission will foster early technical discussions among co-channel terrestrial and satellite systems, and will greatly increase the likelihood for cooperative undertakings by those parties, including the possibility of the terrestrial operator investing in the satellite system. By creating an incentive for terrestrial operators to joint venture with MSS systems, the Commission increases the likelihood of early deployment of the satellite systems, which generally are recognized as being best suited to provide service to rural areas. Experience teaches that sparsely populated rural areas are the last places that terrestrial systems (mobile or fixed) will serve, due to simple (and seemingly inescapable) economies of scale. The Commission should take this opportunity to create a regulatory scheme in which it may be in the terrestrial operators' long-term interest to invest in satellite systems that can best serve rural areas.

## E. Foreign Satellite Operators

The STS plan would not create any difficulties for foreign-licensed MSS systems that may seek to serve the U.S. market, or for U.S.-licensed systems serving foreign markets. In the U.S., the foreign-licensed satellite system would be on an equal regulatory footing with U.S.-licensed systems (i.e., primary vis á vis all terrestrial systems operating in the relevant MSS band). To the extent that the channels employed by the foreign-licensed MSS system also were licensed to an STS provider, the foreign operator would enjoy the same regulatory protection from interference as its U.S.-licensed counterpart. This would comply with relevant U.S. WTO obligations (assuming the foreign system is licensed by a WTO country; if not, the foreign

system would be equally protected in the U.S. market, assuming it could qualify for entry under the ECO test).

For U.S.-licensed systems serving foreign markets, presumably there would be no U.S.-licensed STS system in operation in those markets. To the extent some other nations followed the U.S. lead and created an STS for their domestic MSS allocations, U.S.-licensed MSS operators presumably would be entitled to the same primary status protection as non-U.S.-licensed systems in those markets.

## CONCLUSION

As demonstrated above and in Iridium's Comments, the STS approach maximizes spectrum efficiency, enhances the likelihood of success of many -- rather than one -- MSS systems (particularly the unbuilt 2 GHz systems), and frees the Commission from having to constantly monitor, inter alia, whether a given terrestrial service operation is truly "ancillary" to a given MSS operation. Concerns regarding de facto reallocations do not arise. Iridium urges the Commission to create a new STS allocation in 1.6/2.4 GHz, L-band and 2 GHz band MSS allocations along the lines discussed above.

Respectfully submitted,

IRIDIUM SATELLITE LLC

By _____
Jeffrey H. Olson
Paul, Weiss, Rifkind, Wharton & Garrison
1615 L Street, NW
Washington, DC 20036
Telephone: 202-223-7326
Facsimile: 202-223-7420
Its Attorneys

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