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

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]

[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,

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