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

In the Matter of	)	
	)	
Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996	)	CC Docket No. 98-146

COMMENTS OF PANAMSAT CORPORATION

PanAmSat Corporation ("PanAmSat") submits these comments in response to the Notice of Inquiry ("NOI") in the above-referenced proceeding.

In the NOI, the Commission notes the potential that satellite systems have to provide broadband two-way communications services and asks whether there are regulatory or other barriers to the development of such systems.[1]

The Commission, working in close cooperation with private industry, has helped to created an environment ripe for the development of competitive satellite systems capable of providing advanced telecommunications services to broad segments of society. PanAmSat cautions, however, that the current uncertainty with respect to NGSO/GSO spectrum sharing has, for the time being, limited the development and deployment of these systems and caused some operators to reevaluate their business plans. Thus, to finish the job and create a regulatory system truly accommodating to next-generation satellite services, the Commission needs to resolve NGSO/GSO sharing issues in a manner that makes clear that GSO operations will be fully protected from harmful interference.

DISCUSSION

I. GSO SATELLITE SYSTEMS HOLD GREAT PROMISE FOR THE FUTURE OF COMMUNICATIONS.

PanAmSat currently operates a world-wide fleet of sixteen spacecraft (with several additional spacecraft under construction), all of which operate exclusively in

[1] NOI ¶ 46.

the FSS bands assigned to geosynchronous satellites. These satellites have been engineered to operate efficiently within their given spectrum bands without interfering with other GSO and terrestrial users of the bands.

PanAmSat's system presently supports a wide range of services, including analog television, digital television, point-to-point data links and large data networks. PanAmSat has invested billions of dollars in its satellite system, and the investment made by its customers and other users in earth stations and related ground based infrastructure is even more significant. In short, an enormous effort has been made by PanAmSat, its customers, and others to establish robust, operating, GSO FSS communications networks that serve the needs of users in the United States and around the world.

The Ka-band, because of its capacity to accommodate broadband transmissions, is ideally suited for two-way advanced telecommunications services. As the Commission has recognized, Ka-band systems "represent a new age in satellite communications."[2] These systems are suited to provide a wide variety of broadband and interactive services, including satellite-delivered Internet services, and can be used with small antennas that make direct-to-home transmission both economical and practical.

If exploited properly, the Ka-band could have a major impact on the U.S. economy. Ka-band systems could add billions to this nation's wealth, be the source of thousands of new jobs, enhance productivity, spawn new industries, and improve our lives at work and home. Ka-band systems "represent an opportunity for the United States to continue its leadership role in promoting global development through enhanced communication infrastructures and services," and "represent a major step in achieving a seamless information infrastructure."[3]

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[2] Third Report and Order (CC Docket No. 92-297), FCC 97-378, ¶ 1 (Oct. 15, 1997).
[3] Id.

II. Recent Proposals Involving NGSO/GSO Sharing Are Chilling Investment In, And The Development and Deployment Of, GSO Communications Satellite Systems.

As the Commission is well aware, recent proposals to share GSO spectrum with NGSO satellite systems have called into question the most basic premises underlying the Commission's band plans for the Ka-band.[4] The Commission adopted its band plan in July 1996,[5] providing a framework for accommodating the conflicting spectrum requirements of LMDS, GSO FSS, NGSO FSS, and NGSO MSS systems. The band plan was the culmination of many months of discussions and filings involving the Commission and interested parties.

A fundamental feature of the band plan involved segmenting the Ka-band to prevent inter-service interference. This segmenting separated the terrestrial systems from the satellite systems, and, in the case of the satellite services, the NGSO systems from the GSO systems. The Commission determined that a "separate band designation is warranted" for GSO and NGSO systems because "[u]ntil such time as studies are completed in the ITU-R, [the Commission] cannot conclude that co-frequency sharing is possible between GSO/FSS and NGSO/FSS systems."[6] Because it could not conclude that sharing was possible, the Commission made GSO operations secondary in the sub-bands that it allocated to NGSO operations on a primary basis, and (with the exception of the sub-bands made available to MSS feeder links) made NGSO operations secondary in the sub-bands that it allocated to GSO operations on a primary basis.[7]

Nonetheless, the Commission has since received applications for NGSO systems in the Ka-band that involve the use of GSO-primary spectrum. These applications do not convincingly demonstrate that NGSO operations will not cause harmful

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[4] Motorola's proposed "Celestri" NGSO system is designed to operate on Ka-band frequencies in which NGSO systems are secondary and GSO systems are primary. In the Matter of Application of Motorola Global Communications, Inc., File No. 79-SAT-P/LA-97(63). Similarly, on July 3, 1997, SkyBridge filed a petition for rulemaking in which it asked the Commission to amend its rules to permit NGSO FSS systems to operate in the U.S. on a co-frequency basis with GSO systems in order to accommodate the proposed SkyBridge system. See In re Amendment of Parts 2.106 and 25.202 of the Commission's Rules, RM- 9147 (filed July 3, 1997).

[5] In The Matter Of Rulemaking To Amend Parts 1, 2, 21, And 25 Of The Commission's Rules, 11 FCC Rcd 19005 (1996).

[6] Id. ¶ 59.

[7] Secondary stations must not cause harmful interference to primary stations, and cannot claim protection from harmful interference caused by primary stations. 47 C.F.R. §§ 2.104, 2.105.

interference to GSO FSS systems. To the contrary, the analysis provided thus far does little to dispel the fears of the GSO FSS industry that NGSO sharing could do serious harm to their operations.

At WRC-97, without detailed technical studies, provisional regulations, including specific power density limits for NGSO systems, were proposed to permit NGSO systems to use certain FSS frequencies that now are used by GSO systems. In the spirit of international cooperation, the United States agreed to the WRC-97 provisional rules, but submitted a declaration in which it emphasized that the power limits adopted "are provisional, and are subject to detailed technical study and review by ITU-R and to confirmation by the next competent World Radiocommunication Conference." Studies conducted since then suggest that the NGSO systems operating on the basis of the provisional rules would, in fact, cause harmful interference to GSO operations.

The pendency of the applications proposing NGSO/GSO sharing threatens to undermine the widespread deployment of broadband GSO FSS systems. The GSO FSS satellite industry has devoted considerable time, attention, and resources to help in the development of regulatory rules governing FSS operations in the Ka-band because of the need for certainty on key technical parameters prior to construction. The pending NGSO band sharing proposals create precisely the kind of uncertainty and risk that the band plan was intended to eliminate. Only with increased certainty with respect to spectrum availability will the full potential of high-bandwidth satellite systems be realized.

CONCLUSION

In order to promote the development of next-generation FSS systems, the Commission should not license NGSO systems in bands in which GSO systems have a primary allocation unless it can be shown convincingly that the NGSO systems will not cause harmful interference to GSO systems in the band.

Respectfully submitted,

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