

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

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Federal Communications Commission
Office of Secretary

In the Matter of Application of)
)
Motorola Global Communications, Inc.) File No. 79-SAT-P/LA-97(63)
)
For Authority to Launch and Operate a Global)
Network of Low Earth Orbit Communications)
Satellites in the Fixed Satellite Service)

Received

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Satellite Policy Branch
International Division

JOINT PETITION TO DEFER PROCESSING

Motorola Global Communications, Inc. ("Motorola") has filed the above-referenced application to launch and operate the Celestri Multimedia LEO System ("Celestri"), a low earth orbit ("LEO") satellite system in the Fixed-Satellite Service ("FSS"). The undersigned companies (the "Satellite Coalition"), representing a cross-section of the U.S. satellite industry, hereby jointly petition the Commission to defer action on the application. Individual members of the coalition also are filing separately.

The Satellite Coalition takes no position concerning the portions of Motorola's application proposing use of Ka-band frequencies that are allocated to non-geostationary orbit ("NGSO") systems on a primary basis. The coalition urges, however, that the Commission defer considering Motorola's proposal to operate on Ka-band frequencies as to which NGSO systems are secondary and geostationary orbit ("GSO") systems are primary. These portions of the Celestri application should be deferred because Motorola has not shown that it will avoid harmful interference to GSO systems and the ITU-R process examining the issue of NGSO systems interfering with GSO systems has not been completed.

In addition, the Commission should state clearly and unequivocally that it will not permit NGSO FSS operations in the GSO FSS bands unless there is convincing evidence that co-frequency sharing is technically feasible. Absent this statement, the pendency of Celestri's application will chill the research and development, entrepreneurship and investment without which GSO operations in the Ka-band cannot become a reality.

DISCUSSION

I. MOTOROLA'S APPLICATION IS PREMATURE AND INCONSISTENT WITH THE SPIRIT OF THE COMMISSION'S BAND PLAN.

The Commission adopted a band plan for the Ka-band in July 1996.¹ The band plan provides 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. In connection with its efforts to secure feeder link spectrum for the NGSO MSS Iridium system, Motorola was an active participant in these proceedings.

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."² Because it

¹ First Report and Order and Fourth Notice of Proposed Rulemaking (CC Docket No. 92-297), 11 FCC Rcd 19005 (1996).

² *Id.* ¶ 59.

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.³

Motorola has not satisfied its burden of demonstrating that it could avoid harmful interference to GSO FSS systems. To the contrary, as discussed in the separate filings by members of the Satellite Coalition, Motorola's analysis does little to dispel the fears of the GSO FSS industry that Celestri could do serious harm to their operations.

In addition, Motorola has not addressed the Commission's determination when it adopted the band plan that it "cannot conclude that co-frequency sharing is possible" until "such time as studies are completed in the ITU-R."⁴ Studies have not been completed at the ITU-R, and the process of evaluating whether NGSO systems operating in the Ka-band would cause harmful interference to geostationary orbit GSO systems operating on the same frequencies is at a preliminary stage.

At the 1997 World Radiocommunication Conference ("WRC-97"), the U.S. delegation worked to resolve difficult issues related to the sharing of Ku and Ka-band frequencies by GSO and NGSO systems. Because of the exceedingly complex technical issues involved and the novelty of GSO/NGSO sharing, the United States and the Satellite Coalition advocated at WRC-97 a comprehensive analysis of any proposed regulations that would allow GSO/NGSO frequency sharing. Nonetheless, and

³ 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.

⁴ First Report and Order and Fourth Notice of Proposed Rulemaking (CC Docket No. 92-297), 11 FCC Rcd 19005 at ¶ 59 (1996).

without detailed technical studies, provisional regulations, including specific power density limits for NGSO systems, were proposed at WRC-97, which would permit NGSO systems to use certain FSS and Broadcast-Satellite Service ("BSS") 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." Further, the United States advised that future NGSO systems would be required to conform to any final regulations that the WRC adopts following the "detailed technical study" of GSO/NGSO band sharing that was lacking at WRC-97.

The Satellite Coalition is concerned that inter-system interference may result from GSO and NGSO co-frequency sharing done in accordance with the WRC-97 provisional regulations. The coalition is committed to joining in the technical analysis that is necessary in this area. For now, however, the ITU's "provisional" regulations cannot serve as the foundation for Commission action.

It should be apparent from the foregoing that Motorola's application is premature and inconsistent with the spirit of the band plan for the Ka-band. The Commission dedicated a portion of the band to NGSO systems based on its determination that, absent the completion of studies in the ITU-R, it could not conclude that co-frequency sharing between NGSO and GSO systems is warranted. Now, with the ITU-R process barely underway, Motorola is proposing to launch and operate a system that, in addition to using the frequencies that the Commission earmarked for NGSO systems, would encroach upon the frequencies that the Commission allocated to GSO systems on a primary basis. Accordingly, the Commission should defer processing of the Celestri application until the ITU-R

process has been completed and until the industry has had an opportunity to evaluate meaningfully the feasibility of sharing between NGSO and GSO systems.⁵

II. THE PENDING OF MOTOROLA'S APPLICATION WILL CHILL DEVELOPMENT OF THE KA-BAND.

The Ka-band is a source of promise and pitfalls for the GSO FSS industry. As the Commission has recognized, Ka-band systems "represent a new age in satellite communications."⁶ These systems are ideally suited to providing 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. The systems also would afford needed expansion capacity for services that are rapidly outgrowing their homes in C-band and Ku-band.

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. Perhaps most significantly for this Commission, 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."⁷

⁵ For reasons that are discussed more fully in the separate filings of Satellite Coalition members, the coalition also takes issue with Motorola's claim that it would be permissible for Celestri to interfere with GSO satellites once they are operated in an inclined orbit. As the operator of a secondary system, Motorola would have to yield to the primary rights of the GSO inclined orbit satellites. *See* 47 C.F.R. §§ 2.104, 2.105.

⁶ Third Report and Order (CC Docket No. 92-297), FCC 97-378, ¶ 1 (Oct. 15, 1997).

⁷ *Id.*

However, the pendency of the Celestri application threatens GSO Ka-band deployment. The members of the Satellite Coalition devoted considerable time, attention, and resources to the Ka-band plan precisely because of the need for certainty on key technical parameters prior to construction. The Celestri application, together with the events at WRC '97, reinstate the uncertainty and risk that the band plan was intended to eliminate.

The mere pendency of the Celestri application will chill the development of GSO FSS systems in the Ka-band, and denying or deferring the processing of the Celestri application, although necessary, is not sufficient. The Satellite Coalition, therefore, urges the Commission to state clearly and unequivocally that it will not license NGSO systems in the portion of the band in which GSO systems have a primary allocation unless it can be shown convincingly that the NGSO systems will not cause harmful interference to the GSO systems.

CONCLUSION

Motorola acted prematurely by proposing to operate an NGSO system on frequencies where NGSO satellites are secondary and GSO satellites are primary before the ITU-R or the Commission has had an opportunity to assess meaningfully whether co-frequency sharing is possible. Motorola thereby has violated the spirit of the Commission's band sharing plan, which is premised on separate frequency segments for GSO and NGSO operations until sharing studies are completed.

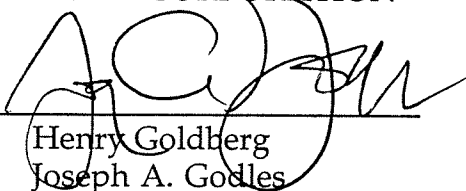
On the present record, Motorola has failed to demonstrate that its NGSO system can operate on GSO frequencies without causing harmful intersystem interference. For this reason, and in light of the billions of dollars that must be

invested to exploit the GSO FSS portion of the Ka-band, Motorola's application should be denied. In the event that the application is not denied, moreover, at a minimum the Commission should defer processing pending completion of the ITU-R process. The coalition also requests that the Commission express its commitment to preserving interference-free operations for GSO FSS Ka-band systems.

Respectfully submitted,

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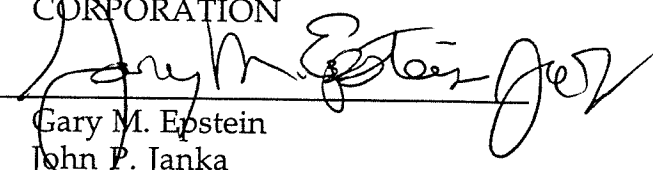
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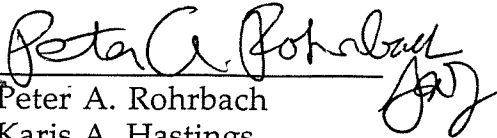

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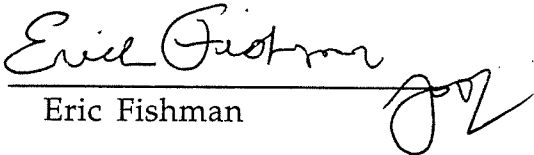
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December 22, 1997

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing Petition to Defer Processing was sent by first-class mail, postage prepaid, this 22nd day of December, 1997, to each of the following:

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