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

In the Matter of	)	
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	)	
Ellipsat Corporation	)	File No. 11-DSS-P-91(6)
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COMMENTS OF CONSTELLATION COMMUNICATIONS, INC.

Constellation Communications, Inc. ("CONSTELLATION"), by its attorneys, hereby submits its Comments in response to the Commission's Public Notice[1/] initiating this proceeding. By this Public Notice, the Commission has invited comment on the application of Ellipsat Corporation ("Ellipsat") for authority to construct six satellites to be known as the Ellipsat system. This system proposes to utilize the entire 1610-1626.5 MHz and 2383.5-2400 MHz bands ("RDSS bands"). Although CONSTELLATION strongly supports the implementation of low earth orbit ("LEO") satellite systems in the RDSS bands, it opposes grant of this application as submitted by Ellipsat until it can be demonstrated that this proposed LEO system is in fact consistent with the licensing of multiple, competing LEO systems in the RDSS bands.

1/ Report No. DS-1068 (April 1, 1991)

CONSTELLATION is a new venture created to establish the ARIES low earth orbit satellite system. CONSTELLATION's strategic technical partners include Defense Systems, Inc. ("DSI"), MicroSat Launch Systems, Inc. ("MicroSat"), and Pacific Communication Sciences, Inc., ("PCSI"). With CONSTELLATION, these companies bring significant expertise in the areas of mobile satellite receiver technology, space station manufacturing and economically viable satellite launch services. Concurrently with the filing of these Comments, CONSTELLATION has submitted to the Commission a Satellite System Application and individual space station applications for the ARIES satellite system. When in orbit, the ARIES satellite system will be comprised of forty-eight low earth orbit satellites organized into four orbital planes of twelve satellites each. Together these satellites will provide radiodetermination satellite service ("RDSS") and two-way digital voice and messaging services. The services will be available to users throughout the United States and the world via low cost portable mobile transceivers. Unlike the Ellipsat system, the ARIES system only requires 2 MHz of frequency in the RDSS L-band, thus allowing for multiple entry and competition in the provision of mobile satellite service.

BACKGROUND

In its application, Ellipsat seeks authorization to construct a LEO satellite system consisting of 6 satellites operating in elliptical orbit. Ellipsat proposes to provide RDSS and mobile satellite services, including two-way digital voice and data communications. As indicated above, in order to provide these services, Ellipsat requests authorization to use the entire 16.5 MHz allocated for RDSS in the 1610-1626.5 MHz and 2483.5-2900 MHz band. It proposes to subdivide each band into 10 segments of 1.4 MHz used for CDMA communications, and two additional channels are for signalling). One signalling channel supports the uplink, while the other supports the downlink.

ARGUMENT

A. No LEO system should be provided exclusive access to the entire RDSS bands

The Commission should not sanction the creation of a monopoly in the provision of mobile communication services provided by low earth orbit satellites operating in the RDSS bands. This would not serve the public interest and would be directly contrary to established Commission policies promoting open entry and competition.

The concept of open or multiple entry has served as a foundation for Commission policy in many areas including domestic satellites. As is described in greater detail below,

the Commission has repeatedly refused to sanction monopolies simply because of limited spectrum. By requiring competitive offerings of services, the Commission has fostered price and service competition that has greatly benefitted the public.

The procedures and policies adopted by the Commission in the context of the applications for the initial round of domestic satellite licenses provide an important lesson. In that case, the Commission attempted "to afford a reasonable opportunity for multiple entities to demonstrate how any operational and economic characteristics peculiar to the satellite technology can be used to provide existing and new specialized services more economically and efficiently than can be done by terrestrial facilities."[2/] This policy has successfully encouraged the development of new technologies and introduction of new services.[3/]

2/ Establishment of Domestic Communications-Satellite Facilities by Non-Governmental Entities, Second Report and Order, 35 FCC 2d 844, 846 (1972).

3/ The Commission also has applied its open entry policy to other aspects of mobile communications. See e.g. Amendment of the Commission's Rules Relative to Allocation of the 849-851/894-896 MHz Bands, Gen. Docket No. 88-96, Report and Order (June 15, 1990)(adoption of open entry sharing approach for air-to-ground service).

These same successful policies have been applied to the RDSS bands[4/] and should continue to be applied to LEO satellites operating in these bands. Licensing of a single LEO service provider and the establishment of a monopoly for these services in the RDSS L-band would clearly have a negative impact on the public interest by eliminating price competition and reducing incentives to adopt innovative technology in the future.

The importance and continued validity of decisions to permit multiple satellite systems has been recognized by members of the current Commission:

> Our basic communications policy, is grounded in confidence that markets work best -- particularly when characterized by open entry, and full and fair competition. And, that confidence in market competition is borne out of nearly 20 years of generally positive regulatory experience -- which has proven to be very beneficial for our country. . . . We are fortunate that, as U.S. satellite policy was being developed, it wasn't shaped by determinists, but rather by humble and visionary people. The humble realized that they might lack adequate insight into the future to justify limiting opportunities. And, the visionaries saw unlimited possibilities -- and realized the spur of competition was the best means

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4/ Amendment of the Commission's Rules to Allocate Spectrum for, and to Establish other Rules and Policies Pertaining to, a Radiodetermination Satellite Service, 104 FCC 2d 650 (1986) ("RDSS Licensing Order").

> of converting their vision into reality. Today, in Washington, communications policymakers are required to navigate in increasingly crowded, tempestuous waters. And, in my judgment, we're most likely to chart a course which proves good for the country, if we remember the "Open Skies" success.[5/]

CONSTELLATION believes that the Commission's open entry policies must continue to guide the Commission's hand in the area of LEO satellites utilizing the RDSS L-band frequency. The Commission should not grant the Ellipsat application until it is clear that other, competing LEO systems, including the ARIES system, can be granted at the same time. The grant of any authorization to use the entire RDSS L-bands on an exclusive basis would have a detrimental impact on the development of the LEO market as well as the overall market for satellite-based communications to mobile users by inhibiting innovation and price competition. As the CONSTELLATION application demonstrates, there is no technical or economic reason to create a monopoly in these bands.[6/]

5/ Remarks of Alfred C. Sikes, 1990 FCC LEXIS 879 (Feb. 7, 1990).

6/ CONSTELLATION has designed a low earth orbit system that can be economically viable with a minimal amount of frequency.

A. Verification is Needed of the Technical Claims made for the Ellipsat System

In support of its application, Ellipsat makes a number of claims that warrant further review. For example, it is not clear that the relatively high gains being claimed for the satellite and earth station antennas used in the Ellipsat system can in fact be maintained over as wide an angular range as stated in the application. Moreover, it appears that the technical performance described in the January 30, 1991 amendments apply to the Ellipse II series of satellites rather than the Ellipse I satellites for which Ellipsat has in fact filed applications. Thus, the Commission should closely scrutinize these applications before any decision is made to consider the Ellipsat system as a baseline for LEO systems in the RDSS bands.

C. Ellipsat should not be allowed to use important L-band capacity for feeder links

In its proposal Ellipsat seeks to utilize the RDSS bands for feeder links and telemetry and control beacons. CONSTELLATION strongly objects to utilizing such important frequency for such feeder links. As the Commission is aware, RR 726A prohibits feeder links in the L-band frequencies allocated to mobile satellite services (MSS) because feeder links: the same consideration that led to this restriction on the use of MSS bands for feeder links are equally applicable to the RDSS bands. Such a prohibition would result in a more efficient utilization of the limited frequency bands most

desirable environment for satellite mobile communications, while feeder links can be provided in the more abundant higher frequency bands allocated to the fixed satellite service.

In recognition of this fact, CONSTELLATION has decided to use the 5150-5166.5 MHz and 6525-6541.5 MHz bands for feeder links and telemetry and control beacons. It believes that there is no valid reason for Ellipsat to utilize the RDSS bands for these purposes and urges the Commission to require all LEO system operators to use the RDSS bands only for satellite mobile communication purposes and not for feeder links.

D. The Commission should implement a competitive market approach for LEO system

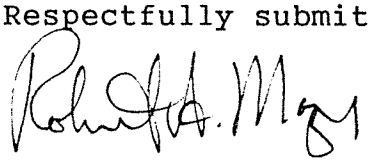
CONSTELLATION in its ARIES system application has demonstrated that multiple economic low-earth orbit systems can be implemented in the RDSS bands. As is described more fully in CONSTELLATION's Petition for Rulemaking, all applicants should be able to be accommodated in the RDSS bands. Specifically, CONSTELLATION urges the Commission to establish technical parameters for compatible operation of LEO systems. The Commission should then grant licenses to all qualified applicants who seek to utilize these bands and agree to comply with these technical parameters. Each applicant should be granted a minimal amount of frequency (CONSTELLATION has proposed an assignment of 2 MHz per applicant in the

1610-1626.5 MHz band and 16 MHz on a shared non-exclusive basis in the S-band) for initial operations. Additional frequency could be granted if demand warrants. Finally, all licenses should be required to coordinate actual system implementation among themselves.

CONCLUSION

For the above reasons, CONSTELLATION believes that it is imperative that the Commission should establish a multiple entry policy for LEO systems in the RDSS bands and require Ellipsat to conform to the technical standards to be established by the Commission to implement such a policy. To do otherwise will be a deviation from long standing Commission policy and detrimental to the public interest.

Respectfully submitted,



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Dated: June 3, 1991

CERTIFICATE OF SERVICE

I, Robert A. Mazer, hereby certify that the foregoing Comments of Constellation Communications, Inc. have been served by first class mail, postage prepaid, on:

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