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**Federal Communications Commission** APR 10 1995

WASHINGTON, D.C. 20554

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

APR 12 1995  
FEDERAL COMMUNICATIONS COMMISSION

In the Matter of	)	
	)	
The Non-Voice, Non-Geostationary	)	
Mobile Satellite Service	)	
Applications of	)	
	)	
CTA Commercial Systems, Inc.	)	File No. 23-SAT-P/LA-95
	)	
E-Sat, Inc.	)	File No. 24-SAT-P/LA-95
	)	
Final Analysis Communication	)	File No. 25-SAT-P/LA-95
Services, Inc.	)	
	)	
GE American Communications, Inc.	)	File No. 26-SAT-P/LA-95
	)	
Leo One USA Corporation	)	File No. 27-SAT-AMEND-95
	)	
Orbital Communications Corporation	)	File No. 28-SAT-MP/ML-95
	)	
Volunteers In Technical Assistance	)	File No. 29-SAT-AMEND-95

To: Chief, International Bureau

**REPLY COMMENTS OF STARSYS GLOBAL POSITIONING, INC.**

STARSYS Global Positioning, Inc. ("STARSYS"), by counsel, hereby replies to comments filed by GE American Communications, Inc. ("GE Americom") and Motorola Satellite Communications, Inc. ("Motorola") concerning the above-captioned applications for authority to construct non-voice, non-geostationary mobile-satellite service ("NVNG MSS") systems. Motorola's comments are directed solely to the issue of establishing orbital assignments and control criteria for non-geostationary satellite systems generally. Among other issues, GE Americom addresses the

provisions of the Joint Sharing Agreement that was entered into by the first round NVNG MSS applicants in its comments on the application of Orbital Communications Corporation ("Orbcomm").

**1. Reply to Motorola**

STARSYS agrees with Motorola that, with many low-Earth orbit satellite systems seeking to launch multiple satellites, the issues of assigning access to orbital altitudes and monitoring the positions of these satellites take on heightened importance. STARSYS cautions, however, that the need for debate and study is wide-ranging, indeed international, in scope. With the possible exception of the suggestion that the Commission require close compliance with orbital parameters in any authorization that may be issued in these proceedings (see Motorola Comments at 4), the issues Motorola raises should probably be addressed in a rulemaking proceeding of general applicability.

Motorola's comments raise substantial issues concerning the manner in which satellite orbits of non-geostationary spacecraft should be regulated. For example, Motorola broadly states that the Commission should establish parameters that "avoid any risk of collision," a standard that cannot possibly be defined, let alone met. Motorola Comments at 2-3. This simply illustrates the fact that establishing guidelines for orbital altitudes will require some technical analysis to determine what the risks are under defined circumstances.

Similarly, Motorola's suggestion that licensees be required to implement "orbital correction mechanisms" to correct deviations beyond "reasonable tolerance levels" begs two questions. Motorola Comments at 3 n.2. First, it is not at all clear what sort of "correction mechanisms" Motorola is advocating, or how broad such a requirement would be. For example, Motorola does not specify whether it proposes that all individual geostationary space stations, including experimental satellites, have such capabilities, or whether this requirement should apply only to space stations that are part of multiple satellite constellations.

Second, Motorola does not provide any suggestion concerning what constitutes the "reasonable tolerance level" beyond which correction would be required. It is unclear, for instance, exactly what degree of protection or separation between constellations Motorola believes is appropriate. Motorola expresses concern about two systems that will be more than two-hundred kilometers above its own orbit height, in addition to systems orbiting twenty kilometers higher. See Motorola Comments at 3. And Motorola offers no ideas as to how elliptical orbit satellites, which may cross the orbital altitudes of many other non-geostationary systems, or newly-launched satellites passing through certain low-Earth orbits on their way to higher altitudes, would be treated. At the least, Motorola needs to be more specific concerning the orbital parameters that would be regulated, and the means for achieving compliance.

In short, while STARSYS agrees with Motorola that the issue of regulating and monitoring orbital assignments must be addressed, this cannot be done

without establishing clear technical guidelines, as well as a reasonable means for determining priority among systems. Motorola has not offered workable approaches to achieve either of these ends, and it is doubtful that proceedings intended to address specific applications represent the appropriate forum for such a debate.

## 2. Reply to GE Americom

STARSYS also comments here on GE Americom's assertion that the Joint Sharing Agreement ("JSA") among Orbcomm, STARSYS and Volunteers In Technical Assistance ("VITA") "is not locked in stone."<sup>1/</sup> In fact, as a private agreement among the first round applicants that was entered into to facilitate sharing and avoid mutual exclusivity, the JSA itself is not subject to amendment to accommodate new applicants that have decided they would like to provide NVNG MSS.

The JSA provided a foundation for the adoption of the rules governing NVNG MSS, and enabled the Commission to conclude that the first-round applicants were not mutually exclusive.<sup>2/</sup> Under the Commission's NVNG MSS rules, new applicants must demonstrate (as a threshold technical qualifications showing) that their proposed systems will not cause unacceptable interference to previously authorized

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<sup>1/</sup> See Comments of GE Americom, File No. 28-SAT-MP/ML-95, at 5 (filed February 24, 1995).

<sup>2/</sup> See Orbital Communications Corp., 9 FCC Rcd 6476, 6479 n.27 (1994) ("Orbcomm Order").

systems.<sup>3/</sup> Thus, second round applicants will need to protect all systems licensed as a result of the first round of applications.

The established sharing environment in the existing NVNG MSS bands provides for entry by additional service providers. The burden is squarely upon these prospective service providers, however, to demonstrate how their new service can be offered without causing interference to previously authorized systems. While it may be possible for these new applicants to reach their own sharing agreement in order to ensure protection of previously licensed operators, and each other, deviation from the sharing scenario detailed in the JSA will be approved by the Commission only when an applicant demonstrates conclusively that such a sharing plan does not "adversely impact" the first round applicants.<sup>4/</sup> GE Americom has not yet attempted such a showing.

\* \* \* \* \*

For the foregoing reasons, STARSYS urges the Commission to be mindful of the possible need to regulate the orbital altitudes of non-geostationary satellite constellations, and to consider commencing a separate rulemaking proceeding to identify appropriate actions. STARSYS also requests that the Commission reconfirm that the Joint Sharing Agreement that has formed and will form the basis of the spectrum assignments to STARSYS, Orbcomm, and VITA is not subject to alteration to suit new NVNG MSS applicants, and that such new applicants must

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<sup>3/</sup> See 47 C.F.R. § 25.142(a) (1994).

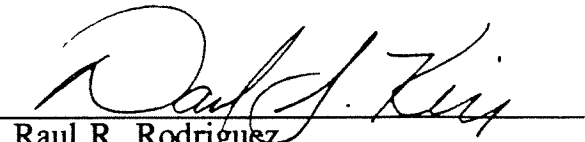
<sup>4/</sup> See Orbcomm Order, 9 FCC Rcd at 6479 n. 27.

demonstrate that their proposed systems will have no adverse impact on first round systems.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I, Kaigh K. Johnson, hereby certify that true and correct copies of the foregoing "Reply Comments of STARSYS Global Positioning Inc." were sent by first-class, postage prepaid mail, this 10th day of April, 1995, to the following:

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