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JUN 17 1991

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

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)
)
Orbital Communications Corporation)
)
Application to Construct a Low Earth)
Orbit Satellite System, Including)
a Major Amendment Thereto)

File Nos.
22-DSS-MP-90(20)
22-DSS-MP-90(2)
RM-7399

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DOMESTIC FACILITIES DIVISION
SATELLITE RADIO BRANCH

PETITION TO DENY

LEOSAT CORPORATION ("LEOSAT") hereby petitions to deny grant of the above-captioned application. As shown below, Orbital Communications Corporation ("ORBCOM") lacks the financial qualifications specified by the Commission's rules and policies to implement the system it has described in its applications, including the major amendment thereto. Furthermore, authorization of the ORBCOM system, as described in its applications, will preclude use of the 137/148 MHz frequency band by any other low earth orbit (LEO) mobile satellite service (MSS) operator, thereby depriving the public of competitively provided VHF MSS service. This result is especially odious to the public interest since given ORBCOM's lack of financial qualifications to construct, launch and operate a 20 satellite constellation, grant of its application would leave the 137/148 MHz band warehoused, and mostly unused.

Due to the unique characteristics of the VHF frequency band (e.g. 137/148 MHz), there is no other MSS system, or other



technology, capable of providing MSS service to terminals costing \$100 or less. Accordingly, authorization of the ORBCOM system would create a monopoly in direct contravention of all prevailing FCC policies. Such a monopoly, when a competitive alternative is readily available, is fundamentally antithetical to the public interest. Accordingly, the ORBCOM application must also be denied on this basis of legal qualification.

Also, the Commission's rules specify that not more than two orbital positions may be applied for absent historical system utilization information showing that applicant has already launched and loaded two satellites. ORBCOM failed to comply with this requirement, rendering the application not legally qualified for grant.

LEOSAT is an interested party in this proceeding because the ORBCOM application is mutually exclusive with LEOSAT's application for a 137/148 MHz band LEO MSS system to serve smart car and smart highway needs throughout the United States. Unlike ORBCOM, LEOSAT is compliant with the FCC's rules by commencing with only two orbit/spectrum assignments, and not precluding other systems.

As an alternative to the ORBCOM scheme, LEOSAT proposes that the Commission authorize each VHF LEO MSS applicant it finds qualified to construct, launch and operate two satellites (as compared to the 20 applied for by ORBCOM). All such authorized VHF LEO MSS applicants would be required to participate in a Technical

Coordination Committee to ensure adequate orbital spacing, frequency sharing and other technical characteristics, including interoperability standards. At such time as an applicant had accomplished its construction and launch of its first two satellites, and demonstrated to the FCC that those satellites were reasonably loaded, it could apply for authorization for a second pair of VHF LEO MSS satellites. After those were launched and loaded, a third pair could be authorized, and so on.

This alternative approach is directly analogous to the Commission's policies in the domsat Fixed Satellite Service (FSS) arena where orbital locations and frequencies are similarly scarce. In this way, all qualified VHF LEO MSS applicants will have an opportunity to demonstrate their abilities to market service to the public, and the public will be spared the inevitable price gouging, indifference and orbit/spectrum warehousing which accompanies the type of monopoly structure proposed by ORBCOM. Were all three domsat VHF LEO MSS applicants now before the Commission found to be qualified, and launched their initial pair of satellites, the U.S. public would have the initial coverage of six satellites and three separate providers of facilities-based competition.

I. ORBCOM LACKS THE FINANCIAL QUALIFICATIONS TO IMPLEMENT ITS SYSTEM AS PROPOSED

By FCC Public Notice Report No. DS-982, Released July 16, 1990, the Commission stated the requirements of a domsat VHF LEO

MSS applicant to be those specified in Appendix B of *Space Station Application Filing Procedures*, 48 Fed. Reg. 40256 (September 6, 1983), as appropriate. Paragraph J of these requirements requires an explanation of all costs of the system applied for, and the source and amounts of funds firmly committed to these costs. The Commission's financial qualification standards based on Paragraph J have been consistently explained for several years as follows:

- if all pending applications could be granted, and additional systems could be authorized in the future, then the standard allows licensees to obtain financing for their projects in stages, including reliance on business plans and future revenues;

- if all pending applications can not be granted, or if licensing an applicant that does not have the current ability to finance their entire system will preclude other qualified applicants, then the standard requires licensees to demonstrate their current ability to finance system construction, launch and the first year of operations.

Hence companies such as Equatorial Communications, a going concern with millions of dollars in revenue, were found financially unqualified to hold a domsat FSS license because it lacked the current resources to finance system construction and the first year of operations. A "strict" financial standard was applied because there was not enough FSS domsat orbit/spectrum for all the applicants. On the other hand, RDSS applicants, such as Iridium, are able to satisfy the Commission's financial standards in stages

because authorization of Iridium will not preclude authorization of other RDSS systems. See, generally, Memorandum Opinion and Order, Geostar Positioning Corporation, April 30, 1991, para. 19.

Fundamentally, the Commission's financial standard qualifications are based on the common sense notion that if there is orbit/spectrum to spare, there is no need to frustrate a company's quest to finance a new satellite project. But if authorizing a financially unqualified company precludes other companies from using orbit/spectrum, then the public interest will be harmed.

ORBCOM's application, as amended, states in Table VI-5 that its total investment costs needed to implement the system applied for total over \$319 million. Its first year operations costs, given in Table VI-8, total an additional \$67 million. Hence the total current resources ORBCOM requires to meet the Commission's financial qualification standards for an "exclusive" satellite system are \$386 million.

The financial qualification information provided in ORBCOM's application does not appear to be amended in its amendment. ORBCOM notes that it is relying on its parent for system financing. The balance sheet of its parent provided in ORBCOM's application, current only as of September 30, 1989, indicates current assets of only \$32 million and current liabilities of \$38 million! Hence, per ORBCOM's own financial information, it not only lacks current resources to finance \$386 million of investment and operating

costs, but has a \$6 million current resources deficit. **Clearly, ORBCOM lacks the financial qualifications to tie up the only VHF LEO MSS spectrum to the preclusion of other applicants.** (Indeed, ORBCOM has failed to pay construction permit fees for more than two of its satellites, and has not paid launch fees for any of its satellites).

To update ORBCOM's financial capabilities, LEOSAT undertook research to find from public sources the most current balance sheet of its parent, appended hereto. This balance sheet, current as of March 31, 1991, shows Total Current Assets of \$50 million and Total Current Liabilities of \$44 million. Retained earnings are negative \$15 million. Once again, it is apparent that with net current assets of only \$6 million, ORBCOM is totally lacking in financial qualifications to launch and operate a \$386 million satellite system.

In summary, it is ORBCOM's own quest to monopolize all of the VHF LEO MSS spectrum, with a 20 satellite constellation that precludes orbit/spectrum sharing with LEOSAT, which gives rise to the qualification standard that ORBCOM have the current resources to implement that which it seeks. Were ORBCOM to seek a compatible VHF LEO MSS satellite system, such as that proposed by LEOSAT, which permits multiple entry, then under FCC policies a more relaxed financial standard would prevail.

LEOSAT relied on the Commission's rules and policies by limiting itself to a two satellite initial VHF LEO MSS configuration, with a plan to launch more satellites as the first two took their place in orbit. In this way, LEOSAT left orbit/spectrum space for up to ten other VHF LEO MSS systems. With such multiple entry possible, under FCC policies, a more relaxed financial standard prevails. Were ORBCOM to amend its application to permit multiple entry as described above and to agree to cooperate in a Technical Coordination Committee, LEOSAT would be pleased to withdraw its Petition to Deny.

II. ORBCOM LACKS LEGAL QUALIFICATIONS TO BE LICENSED AS APPLIED, AND SUCH LICENSING WOULD CONTRAVENE FUNDAMENTAL COMMISSION POLICIES OPPOSED TO MONOPOLIZATION OF SCARCE FREQUENCY RESOURCES.

As noted above, Report No. DS-982 specified the filing requirements for a VHF LEO MSS system. LEOSAT relied on these filing requirements in preparing its application, as well as upon the Commission's statement in Report No. DS-982 that applicants "will be afforded an opportunity to amend their applications, if necessary, to conform with any requirements and policies that may be adopted for a low-earth orbit satellite service in either the frequency allocation or licensing portions of this proceeding."

Paragraph G.3 of the filing requirements specifies that if more than two orbital locations are being requested, detailed information

on the historical use of the system is required. This is in keeping with the Commission's basic domsat policy to authorize no more than two satellites per frequency band, until those first two have been built, launched and used. The reason for this policy is to avoid unfair warehousing or orbit/spectrum. In reliance on and compliance with this filing requirement, LEOSAT filed for two satellite locations. ORBCOM, however, filed for 20 orbital locations (but paid the license fee only for two), without providing any of the historical system utilization information required by paragraph G.3 of the filing requirements. In short, ORBCOM seeks to monopolize all of the VHF LEO MSS orbit/spectrum, in flagrant disregard of the filing requirements and without even paying the appropriate filing fee. Accordingly, ORBCOM lacks the legal qualifications to be licensed to operate the system for which it applied.

Assuming ORBCOM amends its application to come into conformance with the prevailing two satellite at-a-time domsat policy, and then subsequently presented historical utilization information showing that those two satellites were launched and loaded, LEOSAT would have no objection to ORBCOM then filing for a further two satellites. What LEOSAT does object to as being fundamentally unfair, is for ORBCOM to monopolize the entire VHF LEO MSS band when, by its own admission, it lacks the financial capability to even implement its monopolization, but does thereby block LEOSAT and others from serving the public.

The Commission's basic domsat policies, as noted above, are to authorize all qualified applicants if possible. Hence, the Commission noted in Continental Satellite Corp., 4 FCC Rcd 6292 (1989) para. 56, "[i]n recognition of the equal rights of these applicants to the available allocations, each of the seven new and modification applicants will be granted an equal number of orbit/channel reservations from the available supply." For precisely this reason, the Commission makes it a legal requirement not to ask for more than two satellite assignments, unless an applicant has already been licensed and used two satellite assignments. ORBCOM has failed to comply with this legal requirement, and accordingly its application must be denied.

LEOSAT is prepared to work with ORBCOM and other VHF LEO MSS applicants in a Technical Coordination Committee to agree on a frequency plan and orbital spacing to avoid interference among the low earth orbit satellites of different systems. For example, "satellites in the same plane can use the same frequency, so long as they are spaced to eliminate mutual visibility at any point on the earth." ORBCOM Amendment at 6-7. Satellites in adjacent planes would use different frequencies. LEOSAT believes that the Technical Coordination Committee would also likely agree on technical interoperability criteria to ensure that user terminals are compatible with multiple systems.

III. THE ORBCOM APPLICATION SHOULD BE DENIED AS BEING INIMICAL TO THE PUBLIC INTEREST, CONVENIENCE AND NECESSITY

In addition to the lack of financial and legal qualifications as explained above, the ORBCOM application, as amended, sets forth a scheme for the monopolization of low-cost MSS services which contravenes the public interest. Elements of ORBCOM's monopolization scheme include:

- ORBCOM will monopolize the manufacture of VHF LEO MSS satellites, since it says its parent will build all of its own satellites and its application precludes any competing systems in the 137/148 MHz band. It should be noted that many other companies can build such satellites, including the much lower cost Microsats offered to LEOSAT by Defense Systems, Inc. ORBCOM's orbit/spectrum monopolization will stifle the nascent VHF LEO MSS satellite construction industry.

- ORBCOM will monopolize the launch of VHF LEO MSS satellites, since it says its parent will launch all its own satellites, and its application precludes any competing systems in the 137/148 MHz band. It should be noted that many other companies can launch such satellites including McDonnell Douglas, Microsat Launch Systems, and the Ariane ASAP platform, which will handle LEOSAT's launch requirements for a fraction of the price ORBCOM is being charged by its parent. ORBCOM orbit/spectrum

monopolization will stifle the nascent small satellite launch business, by blocking any competition for the VHF LEO MSS segment.

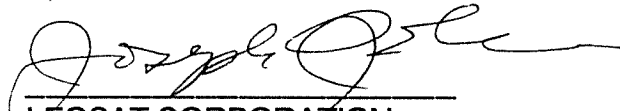
- ORBCOM will monopolize the provision of VHF LEO MSS services to the public, to the obvious detriment of the public in terms of price of service, cost of hardware, and service offerings. For example, ORBCOM's application suggests charging the public as much as \$1 or more per system utilization. LEOSAT's business plan, on the other hand, offers the possibility of free VHF LEO MSS service to the public by bulk-sales of the service to automobile manufacturers, who would then offer the service to car buyers as part of the car's smart car system. Especially since there is no competitive substitute for MSS service in which terminal costs can be reduced to under \$100, it would be a grievous error to frustrate the potential of this new service with a monopoly structure.

Where the public interest demands a service that appears to be a natural monopoly, it is important to seriously explore all possible alternatives to such a service-stifling structure. In the case of VHF LEO MSS, it is clear that service operators will begin by launching one or two satellites, and testing the market for that kind of intermittent service. (With two satellites in orbit, the U.S. will receive coverage every 3-4 hours). Indeed, ORBCOM's, STARSYS' and LEOSAT's business plans submitted to the Commission present exactly such a staged approach. However, instead of permitting other licensees to also start with a couple satellites, and thereby injecting vital competition, ORBCOM seeks to block all competition

by warehousing enough orbit/spectrum for a speculative 20 satellites by the middle of the 1990's. This transparent ploy to block competition must be rejected by the Commission, especially when it endangers the competitive market in small satellite manufacturing, small satellite launching, and low-cost MSS services to the American public.

For all of the above reasons, LEOSAT respectfully asks the Commission to Deny the above-captioned applications of ORBCOM. The undersigned also hereby certifies that he is the technically competent person who has reviewed this Petition to Deny, confirms all technical, business and other representations therein, including service of copies on ORBCOM.

Respectfully Submitted,



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June 17, 1991

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ORBITAL SCIENCES CORPORATION
CONDENSED CONSOLIDATED BALANCE SHEETS
(In thousands, except share data)

ASSETS

	<u>December 31,</u> 1990	<u>March 31,</u> 1991 (unaudited)
CURRENT ASSETS:		
Cash and cash equivalents	\$ 5,230	\$ 6,471
Short-term investments	4,008	2,480
Contract receivables	30,660	38,235
Components inventory	2,468	2,159
Other current assets	<u>656</u>	<u>778</u>
Total current assets	43,022	50,122
PROPERTY, PLANT AND EQUIPMENT, at cost, less accumulated depreciation and amortization of \$6,377 and \$7,101, respectively	20,343	20,899
EXCESS OF PURCHASE PRICE OVER NET ASSETS ACQUIRED, less accumulated amortization of \$3,443 and \$3,817, respectively	26,718	26,344
DEPOSITS AND OTHER ASSETS	<u>1,052</u>	<u>1,257</u>
TOTAL ASSETS	<u>\$ 91,135</u>	<u>\$ 98,623</u>

LIABILITIES AND STOCKHOLDERS' EQUITY

CURRENT LIABILITIES:		
Current portion of long-term obligations	\$ 2,116	\$ 2,128
Short-term borrowings	1,087	11,262
Accounts payable	21,858	20,547
Accrued expenses	7,533	5,836
Deferred revenue	4,103	3,818
Deferred income taxes	—	—
Other current liabilities	<u>101</u>	<u>635</u>
Total current liabilities	36,798	44,226
LONG-TERM OBLIGATIONS, net of current portion	2,725	2,239
COMMITMENTS AND CONTINGENCIES		
STOCKHOLDERS' EQUITY:		
Preferred stock, par value \$.01; 10,000,000 shares authorized, no shares issued or outstanding	—	—
Common stock, par value \$.01; 40,000,000 shares authorized, 9,482,918 and 9,504,049 shares outstanding, after deducting 15,735 shares held in treasury	95	95
Additional paid-in capital	67,625	67,830
Retained earnings (deficit)	<u>(16,108)</u>	<u>(15,767)</u>
Total stockholders' equity	51,612	52,158
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	<u>\$ 91,135</u>	<u>\$ 98,623</u>

The accompanying notes are an integral part of these condensed consolidated financial statements.