

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

DA 95-128

In re Application of)
)
Loral/Qualcomm Partnership, L.P.) File Nos. 19-DSS-P-91(48)
) CSS-91-014
) 21-SAT-MISC-95
For Authority to Construct, Launch, and Operate)
Globalstar, a Low Earth Orbit Satellite System to)
Provide Mobile Satellite Services in the 1610-)
1626.5 MHz/2483.5-2500 MHz Bands)
)
)

ORDER AND AUTHORIZATION

Adopted: January 31, 1995

Released: January 31, 1995

By the Chief, International Bureau:

I. Introduction

1. Loral/Qualcomm Partnership, L.P. ("LQP") filed an application¹ to construct, launch, and operate a low-Earth orbit ("LEO") mobile satellite system in the 1.6/2.4 GHz frequency bands ("Big LEO" service).² On November 15, 1994, LQP amended its application in light of

¹ The original application was filed on June 3, 1991 by Loral Cellular Systems Corp. AMSC Subsidiary Corporation ("AMSC"), Mobile Communications Holdings, Inc. ("MCHI") and Motorola Satellite Communications, Inc. ("Motorola") filed Petitions to Deny. The Communications Satellite Corporation, TRW Inc. ("TRW"), and Constellation Communications, Inc. ("Constellation") filed comments. LQP filed a responsive pleading. The matters raised in those petitions and comments have, except as addressed in this Order, been separately addressed through the adoption of service rules for Big LEO systems, or have otherwise been rendered moot through amendments to LQP's application.

² LQP requests authority to construct a mobile satellite system capable of operating in the 1610.0 - 1626.5/2483.5 - 2500 MHz frequency bands and to operate the system in the United States in the 1610.0 - 1621.35/2483.5 - 2500 MHz frequency bands. See LQP Amendment (Nov. 15, 1994), at 29.

the rules and policies adopted by the Commission to govern "Big LEO" service.³ By Public Notice, Report No. DS-1481 (November 21, 1994), we sought comment on LQP's amended application. AMSC filed a Petition to Defer Processing, Constellation filed Consolidated Comments, MCHI filed a Consolidated Petition to Deny, Motorola filed Consolidated Comments and Petition to Defer and/or Deny, and TRW filed a Petition to Deny. MCHI filed Comments in Support of Opposition to LQP Request for Waiver of Power Flux Density Limits, and LQP filed a Consolidated Response and letter responding to MCHI's Comments in Support of Opposition to LQP Request for Waiver of Power Flux Density Limits. MCHI and TRW filed Consolidated Replies. LQP filed a letter opposing TRW's Consolidated Reply. For the reasons discussed below, we grant LQP's application, as amended, subject to certain conditions.⁴

2. LQP is a Delaware limited partnership whose sole general partner is Loral General Partner, Inc. (LGP). LGP is indirectly 100% owned by Loral Corporation. LGP owns 51% of the LQP partnership interests. It directly holds 2%, while 49% is held by Loral Globalstar, L.P., a Delaware limited partnership wholly owned by LGP. Qualcomm Limited Partner, Inc., wholly owned by Qualcomm Incorporated, owns the other 49% of the LQP partnership interest.

3. LQP proposes to construct, launch, and operate a satellite system called Globalstar consisting of 48 operational, non-geostationary satellites and eight in-orbit spares. The 48 operational satellites would orbit the earth in a circular orbit at an altitude of 1,414 kilometers. Six satellites spaced at 60 degree intervals will occupy each of eight orbital planes at an inclination of 52 degrees with a 45 degree separation between planes. LQP proposes to provide mobile voice, data, facsimile, position location, and other mobile satellite services ("MSS") for both domestic and international subscribers.

4. LQP requests feeder links in the 5025-5225 MHz (uplink) and 6875-7075 MHz (downlink) frequency bands. It acknowledges that it may be required to share these frequencies with other geostationary or non-geostationary satellite systems. It also requests a waiver of the power flux density limit in the 2483.5-2500 MHz mobile satellite service band.

II. Discussion

5. Financial Qualifications. Applicants for space station authorizations in the Big LEO service must demonstrate the financial qualifications set forth in Section 25.143(b)(3) of the

³ Amendment of the Commission's Rules to Establish Rules and Policies Pertaining to a Mobile Satellite Service in the 1610-1626.5/2483.5-2500 MHz Frequency Bands, 9 F.C.C. Rcd. 5936 (1994) ("Big LEO Order").

⁴ If it becomes necessary to implement our interim spectrum sharing plan, code division multiple access ("CDMA") operators will have the option of operating in the 1612-1622.60 MHz frequency bands in addition to the 2483.5-2500 MHz frequency bands for the duration of the interim plan. See Big LEO Order at ¶ 53.

Commission's rules.⁵ Specifically, an applicant must demonstrate that it has the financial resources to meet the estimated costs of the construction, launch, and first-year operation for the satellite system. This can be demonstrated through evidence of the company's current assets, operating revenues, or irrevocably committed debt or equity financing. If it is relying on internal funds, an applicant must also provide evidence of a management commitment.

6. To demonstrate its financial qualifications, LQP relies on the financial resources of its ultimate majority owner, Loral Corporation. LQP estimates that its costs to build and launch the 56 satellites in this system, and to operate the system for one year after the launch of the first satellite, will be approximately \$1.554 billion. LQP reports that Loral Corporation has current assets of \$1.8 billion and operating income of \$400 million. LQP provides a letter from Michael B. Targoff, Loral Corporation's Senior Vice President and Secretary, stating that, absent a material change in circumstances, Loral Corporation is "fully committed" to expending the necessary funds, or to taking all reasonable steps to cause LQP to raise and expend the necessary funds, to finance the construction, launch, and operation of the Globalstar system for one year after the launch of the first satellite.⁶

7. TRW asserts that LQP has understated the cost of its proposed system by at least \$856 million, and that as a consequence, the costs of construction, launch, and one year of operation exceed the current assets and operating income of Loral Corporation.⁷ LQP responds that its cost projection is based on a firm, fixed-price contract awarded to Space Systems/Loral, Inc. ("SSL") to design, construct, and launch the Globalstar satellites.⁸

8. TRW has not presented any evidence that the SSL contract is not valid or that the contract does not cover the needed services. TRW merely uses independent, unrelated data to suggest that the projected costs are unrealistic. Thus, there is no reason to conclude that LQP's specifically contracted price is unreliable. Absent evidence of misrepresentation or patent implausibility, the Bureau is not in a position to question an applicants's cost projections.

9. AMSC, TRW, and MCHI allege that, even assuming LQP's cost estimates to be reasonable, LQP has failed to submit information sufficient to demonstrate its compliance with our financial requirements.⁹ Specifically, they claim LQP cannot rely on the current assets and operating revenues of Loral Corporation because Loral Corporation states that it will "expend the necessary funds, or take all reasonable steps to cause LQP to raise and expend the necessary

⁵ 47 C.F.R. § 25.143(b)(3).

⁶ LQP Consolidated Response to Petitions and Comments at attachment A.

⁷ TRW Petition at 4-9.

⁸ LQP Response at 12.

⁹ AMSC Petition at 5; TRW Petition at 10; MCHI Petition at 20.

funds" (emphasis added). AMSC and MCHI assert, based on SEC filings, that Loral Corporation intends primarily to fund the system from external sources and not internal assets or income. They submit that, based on LQP's stated intent to seek external financing, it cannot reasonably claim at the same time to rely on internal funding. Therefore, they argue, the letter is insufficient, and LQP must submit evidence of ready external financing.¹⁰ MCHI also argues that LQP's reliance on internal assets despite its intent to seek outside sources of funding calls its candor into question.¹¹

10. In the Big LEO Order, the Commission stated that "[t]he availability of internal funds sufficient to cover a system's costs provides adequate assurance at the time the Commission acts on the application, that the system can be built and launched. Current assets provide a general measure of a company's ability to finance the project itself or to raise funds from lenders and equity investors on the basis of its on-going operations."¹² LQP has submitted adequate evidence to show that Loral Corporation has current assets and operating income sufficient to construct the system, and Loral Corporation has provided an unequivocal statement that it is prepared to expend the funds necessary to construct, launch, and operate the proposed system for one year. The Commission's rules and policies do not require more. We have also reviewed the alleged inconsistencies between LQP's statements to the Commission and its statements in SEC filings concerning its financing plans. We conclude that the statements are entirely consistent, and raise no substantial material question of fact that would require a hearing as to the applicant's candor.

11. Finally, MCHI asks the Commission to scrutinize whether a transfer of control of LQP has occurred. It further argues that LQP has created an ownership structure so complex that Loral Corporation may have been effectively insulated from Commission scrutiny, and that LQP may not be the appropriate applicant. MCHI maintains that LQP's complex ownership "labyrinth" must be examined at a hearing.¹³ LQP replies that it has consistently kept the Commission apprised of changes in its ownership structure. It asserts that Loral Corporation maintains ultimate control of the applicant.¹⁴

12. In questioning LQP's "byzantine ownership structure," MCHI includes only one paragraph of vague accusations. We have already found LQP as currently structured to be financially qualified. We recognize that in the significant amount of time that has passed since the Big LEO applications were filed, LQP has made several revisions to its ownership structure. Several of the applicants in this new service, however, have altered their ownership structures

¹⁰ AMSC Petition at 5-6; MCHI Petition at 20-22.

¹¹ MCHI Petition at 22.

¹² Big LEO Order at ¶ 31 (emphasis added).

¹³ MCHI Petition at 22-23.

¹⁴ LQP Response at 10-12.

over the course of this proceeding to take advantage of new financing possibilities. We recognize that some of these changes might be considered "major amendments" under Section 25.116 of the Commission's Rules,¹⁵ jeopardizing eligibility for consideration in this processing group. However, our overriding concern in determining whether a "major amendment" has occurred is whether the applicant has attempted to profit from the sale of an application.¹⁶ Unless there is evidence of this, we see no reason to prevent applicants from procuring partners to help finance the enormous cost of these systems. Regardless of whether there has been a transfer of control here, we find no intent to traffick in applications. Consequently, even if a "major" change in LQP's ownership has occurred, we find these ownership changes to be in the public interest pursuant to Section 25.116(c)(2) of the Commission's Rules, and we will not treat LQP's application as newly filed.¹⁷

13. Technical Qualifications. Applicants seeking authority to construct and launch Big LEO systems also must meet certain technical requirements. These requirements include: (1) using a non-geostationary system design; (2) providing mobile satellite service to all locations as far north as 70° latitude and as far south as 55° latitude for at least 75 percent of every 24-hour period; (3) providing continuous service throughout the fifty states, Puerto Rico, and the U.S. Virgin Islands; and (4) preventing unacceptable interference to other authorized users of the spectrum.¹⁸

14. LQP states that the Globalstar satellites are non-geostationary and will provide continuous global coverage between 74 degrees north and 74 degrees south latitude, exceeding the requirements of our rules. Further, the Globalstar system will provide continuous service over the entire continental United States, Alaska, Hawaii, Puerto Rico, and the U.S. Virgin Islands. Finally, LQP says that the system is capable of providing the required protection for the Radio-Astronomy Service, Radio Navigation Satellite Service, Aeronautical Radio Navigation Service, and International Aeronautical Radio-Navigation Service.¹⁹ No commenter has refuted any of these claims. We find that LQP's November 15, 1994 amendment has fulfilled all technical

¹⁵ 47 C.F.R. § 25.116.

¹⁶ In this regard, the Big LEO service differs from services in which multiple or cross-ownership rules may require closer review of ownership changes. Furthermore, the Big LEO applicants have each proposed to operate as private carriers. Thus, concerns about ownership changes that may violate Section 310(b) of the Communications Act are considerably diminished.

¹⁷ The only amendment filed by LQP since the last public notice informed the Commission of a change in ownership that we find to be minor. LQP Amendment (Dec. 16, 1994).

¹⁸ 47 C.F.R. § 25.143(b)(2); 47 C.F.R. § 25.213.

¹⁹ LQP Amendment (Nov. 15, 1994), at 24-28.

requirements of Section 25.143(b)(2) of the Commission's Rules.²⁰

15. Feeder Links. LQP requests feeder links at 5025-5225 MHz (Earth-to-space) and 6875-7075 MHz (space-to-Earth). Motorola argues that LQP's amended request for feeder link frequencies constitutes a major amendment under Section 25.116 of our rules.²¹ It claims that the amendment was not necessitated by the new policies and rules established in the Big LEO Order, and that it increases the potential for interference without resolving any frequency conflicts. Motorola also claims the amended request will decrease the likelihood that there will be enough spectrum available for all the qualified applicants in their desired feeder link bands, and that such requests will further delay unconditional licenses to Motorola and other system operators. In its Response, LQP states that the increase in bandwidth is directly necessitated by the Big LEO Order, which required band sharing and reduced the amount of service-link spectrum available for CDMA systems. The increase in the number of service beams needed to share spectrum with other CDMA systems translated into a direct need for increased feeder link spectrum, LQP states.

16. In the Big LEO Order, the Commission afforded applicants the opportunity to amend their applications to bring them into conformance with newly adopted requirements and policies for satellite systems. It noted, for example, that a change from a geostationary system configuration to a LEO configuration to meet our satellite system design requirement, or a change in coverage patterns to conform with our satellite visibility requirements, would not affect a particular application's status in the processing group. It also indicated, however, that "a change that is not necessary to bring the application into conformance with our rules and which would increase frequency conflicts" would render the application newly filed under Section 25.116 of the rules.²² As an example, it stated that a design change from a CDMA to a TDMA/FDMA system, which would not facilitate spectrum sharing, would be a major amendment. Such applications would be considered in a future processing group, after January 1996.

17. LQP redesigned its system to facilitate the spectrum sharing plan adopted in the Big LEO Order by increasing the number of end users that can be served simultaneously. It appears that LQP's feeder link requests were a consequence of this redesign. Therefore, we do not believe the changes in LQP's feeder link proposal should be considered major. Furthermore, even if

²⁰ We note that this license does not authorize MSS earth terminals or gateway earth terminals. Gateway earth stations will be licensed in accordance with technical requirements for the frequency band to be used. Standards are currently being developed to assure that MSS earth terminals, the Global Positioning System, and the Global Orbiting Navigation Satellite System can coexist in adjacent bands. See Memorandum of Understanding Between the FCC, NTIA and FAA, Public Notice 50736, November 19, 1994.

²¹ 47 C.F.R. § 25.116.

²² Big LEO Order at ¶ 59 (emphasis added).

the amendment were considered major within the meaning of Section 25.116 of the Rules, we would waive its requirements in this case because (a) the modified system serves the public interest by increasing system capacity and spectrum-use-efficiency in the service links; (b) feeder link spectrum is for a use ancillary to the use of Big LEO spectrum; (c) the service is at a relatively early stage of development in which its spectrum requirements are still being addressed; and (d) any third parties who might be adversely affected by feeder link allocations will have a full opportunity to address potential interference concerns in other pending proceedings.²³ Accordingly, we decline to treat LQP's application as newly filed.

18. As stated in our Big LEO Order, we are not in a position to assign feeder link frequencies unconditionally to any applicant.²⁴ Therefore, we will grant qualified applicants the authority to construct, at their own risk, mobile satellite systems capable of operating on the feeder link frequencies they have requested. We believe this is the type of "conditional" license contemplated by the Big LEO Order.²⁵ We will defer acting on requests to launch and operate using specific feeder link frequencies until that spectrum is available to assignment to Big LEO feeder links, and sufficient spectrum is available to satisfy the feeder link requirements of all licensed Big LEO systems, regardless of frequency band.²⁶

19. Waiver Request. LQP requests a waiver of Section 2.106 of the Commission's rules and International Radio Regulation ("RR") 753P to operate its service downlink in the 2.4 GHz band using power flux density (PFD) levels that exceed the levels contained in RR 2566. It states that Task Group 2-2, convened by the International Telecommunication Union to prepare for the upcoming World Radio Conference (WRC-95) to develop sharing criteria for radio services in the 1-3 GHz band, concluded that operation at higher PFD levels increases the capacity of MSS systems, while providing full protection to analog radio relay networks and only a slight

²³ We note that the Commission has a number of issues related to the allocations of spectrum for Big LEO feeder links separately before it in several pending proceedings, including the 28 GHz Proceeding, (Second Notice of Proposed Rule Making in CC Docket No. 92-297), 9 F.C.C.Rcd. 1394 (1994), and Preparation for the World Radio Conference, (Notice of Inquiry in IC Docket No. 94-31), 9 F.C.C.Rcd. 2430 (1994).

²⁴ Big LEO Order at ¶ 166. Accordingly, we will not implement a construction milestone until authority to launch and operate a mobile satellite system using specific feeder link spectrum is granted. *Id.* at ¶ 189.

²⁵ Big LEO Order at ¶ 166.

²⁶ Big LEO Order at ¶ 166. We will afford permittees and applicants an opportunity to revise their requested feeder link bands, if necessary. Consistent with our usual practice, we will place any revised requests on public notice and will provide the public an opportunity to comment.

operating loss to digital radio relay networks operating in the same band.²⁷ LQP says the we should permit these higher PFD levels at all elevation angles.

20. In response, Constellation notes that it and the other CDMA applicants have indicated that they would operate their systems at the PFD levels currently specified in RR 2566, but they would not object to a waiver at elevation angles between 10° and 25°, provided that a waiver is also granted for all LEO systems operating in that band. MCHI argues that waivers should not apply to elevations above 25° because this would increase interference to the other applicants' systems, provide an unfair competitive advantage to LQP or, alternatively, require a major system redesign by MCHI.

21. As a general matter, the Commission does not grant waivers except on a specific factual demonstration that a waiver would further the public interest and Commission objectives. While an increase in the PFD limit may ultimately serve the public interest, granting a waiver to only one applicant might create the potential for harmful interference stemming from differing signal strengths and disparate noise levels. The rulemaking process, not the waiver procedure, is the more appropriate vehicle for changing a technical requirement that will affect all licensees.²⁸ We therefore will address the matter of revising the PFD limits in Section 2.106 in the pending reconsideration of the Big LEO Order. Accordingly, we deny LQP's request for a waiver of Section 2.106 of the Rules.

22. Regulatory Treatment. Pursuant to our discretion under Section 332(c)(5) of the Communications Act, we grant LQP's request that it be regulated as a non-common carrier.²⁹ As we determined in the Big LEO Order, Big LEO space station licensees providing service directly to end users must be regulated as common carriers if the service offering meets the definition of commercial mobile radio service ("CMRS").³⁰ If a Big LEO licensee, however, offers space segment capacity to a reseller or other entity who then offers CMRS to end users, we have the discretion to determine whether to require the licensee to offer such service on a common carriage basis or to permit the offering to be made on a private carriage basis.³¹ We

²⁷ RR 2566 specifies the PFD limits at the earth's surface produced by space station emissions at -152 dB(W/m²) from 0 to 5 degrees above the horizontal plane; $-152 + 0.5(\theta - 5)$ dB(W/m²) for angles of arrival θ (in degrees) between 5 and 25 degrees; and -142 dB(W/m²) for angles between 25 and 90 degrees. Task Group 2-2's proposal would permit a higher PFD with figures of -150, $-150 + 0.65(\theta - 5)$, and -137, respectively, for these angles. See Document 2-2/TEMPT/47(Rev.3)-E.

²⁸ See *WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969).

²⁹ 47 U.S.C. § 332(c)(5).

³⁰ Big LEO Order at ¶ 174.

³¹ *Id.* at ¶ 175.

concluded in the Big LEO Order that there does not appear to be a need to impose common carrier requirements on Big LEO licensees offering space segment capacity to resellers.³² LQP says that the Globalstar space segment will be offered on a contract basis to vendors who in turn will provide MSS services to subscribers and/or resell capacity to other service vendors. LQP does not intend to hold itself out to provide MSS service indifferently to the public.³³ We therefore will allow LQP to operate as a non-common carrier.

23. Other Issues. Finally, LQP reaffirms its request, already tentatively denied in the Big LEO Allocation NPRM, 7 F.C.C. Rcd. at 6420, for a pioneer's preference. LQP submits that the Commission should grant this request at the same time as LQP's space station authorization.³⁴ LQP's request for a pioneer's preference is being addressed in another proceeding. Our decision to issue LQP a license is both consistent with the Commission's desire to license Big LEO service expeditiously, and without prejudice to any action the Commission deems appropriate with respect to LQP's pioneer preference request.

23. Effect of Decisions on Other Applications. In orders released today, the Bureau defers action on the applications of MCHI and Constellation until January 1996. Based on the intraservice sharing plan adopted in the Big LEO Order, it may not be possible to grant all remaining applications for Big LEO licenses. Nonetheless, in granting LQP's application we insulate LQP from any mutual exclusivity that may arise among the remaining applicants. In other words, while LQP's license is conditional in some respects, it will not be affected in any way if the Commission determines that all three of the remaining applicants are qualified for the two remaining licenses that can be awarded for the currently available spectrum.

III. Ordering Clauses

24. Accordingly, IT IS ORDERED that application file Nos. 19-DSS-P-91(48) and CSS-91-014 IS GRANTED, and Loral/Qualcomm Partnership, L.P., IS AUTHORIZED to construct a mobile satellite service system capable of operating in the 1610-1626.5/2483.5-2500 MHz frequency bands, in accordance with the technical specifications set forth in its application and consistent with our rules unless specifically waived herein.

25. IT IS FURTHER ORDERED that Loral/Qualcomm Partnership, L.P., IS AUTHORIZED to launch and operate 48 low-Earth orbiting space stations and eight in-orbit spares during the license term for the purpose of providing a mobile satellite service in the United States in the 1610-1621.35/2483.5-2500 MHz frequency bands in accordance with the technical specifications set forth in its applications and consistent with our rules unless specifically waived herein. In the event the 1610-1612 MHz band is not available for mobile satellite service operations in the

³² Id. at ¶ 179.

³³ LQP Amendment (Nov. 15, 1994), at 9.

³⁴ Id. at n.2.

United States, LQP IS AUTHORIZED to operate in the 1612-1622.60/2483.5-2500 MHz bands.

26. IT IS FURTHER ORDERED that Loral/Qualcomm Partnership, L.P., IS AUTHORIZED to construct, at its own risk, a mobile satellite system capable of operating with feeder links in the 5025-5225 MHz (Earth-to-space) and 6875-7075 MHz (space-to-Earth) frequency bands in accordance with technical specifications set forth in its applications and consistent with our rules unless specifically waived herein.

27. IT IS FURTHER ORDERED that application file No. 21-SAT-MISC-95, a request for a waiver of Section 319(d) of the Communications Act to begin construction of feeder links, IS DISMISSED as moot.

28. IT IS FURTHER ORDERED that Loral/Qualcomm Partnership, L.P. IS AUTHORIZED to offer space segment capacity on its satellite system on a private carriage basis.

29. IT IS FURTHER ORDERED that the license term for the space station constellation is ten years and will commence on the date the licensee certifies to the Commission that the first satellite in the system has been successfully placed into orbit and that the first transmission to or from that satellite in the authorized frequency bands has occurred.

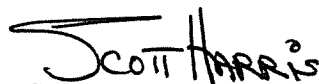
30. IT IS FURTHER ORDERED that this authorization is subject to the completion of consultations under Article XIV of the INTELSAT Agreement and Article 8 of the INMARSAT Convention. Upon completion of these consultations, and notification by the Department of State that the United States has fulfilled its international obligations with respect to INTELSAT and INMARSAT, no further action by this Commission will be required.

31. IT IS FURTHER ORDERED that LQP will prepare any necessary submissions to the International Telecommunication Union (ITU) and will participate in any necessary decisions with other administrations as appropriate in order to coordinate these space stations in accordance with the ITU Radio Regulations.

32. IT IS FURTHER ORDERED that the temporary assignment of any orbital planes, or of any particular frequencies, to Loral/Qualcomm Partnership, L.P. is subject to change by summary order of the Commission on 30 days' notice and does not confer any permanent right to use the orbit and spectrum. Neither this authorization nor any right granted by this authorization, shall be transferred, assigned or disposed of in any manner, voluntarily or

involuntarily, or by transfer of control of any corporation holding this authorization, to any person except upon application to the Commission and upon a finding by the Commission that the public interest, convenience and necessity will be served thereby.

FEDERAL COMMUNICATIONS COMMISSION

A handwritten signature in black ink that reads "SCOTT HARRIS". The signature is stylized, with a large, sweeping initial "S" and the name "HARRIS" written in a cursive-like font.

Scott B. Harris
Chief, International Bureau