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Federal Communications Commission

Before the
Federal Communications Commission
Washington, D.C. 20554

In re application of

MOBILE COMMUNICATIONS
HOLDINGS, INC.

)
)
) File Nos. 11-DSS-P-91(6)
) 18-DSS-P-91(18
) 11-SAT-LA-95
) 12-SAT-AMEND-9
) 158-SAT-AMEND-

For authority to construct, launch, and
operate an elliptical low earth orbit Mobile
Satellite System

ORDER AND AUTHORIZATION

Adopted: June 30, 1997

Released: July 1, 1997

By the Chief, International Bureau and the Chief, Office of Engineering and Technol

1. With this order, we grant the application of Mobile Communications Holding
("MCHI") for a license to construct, launch, and operate a satellite system pursuan
rules governing the Above 1 GHz Mobile Satellite Service, more commonly known as th
"Big LEO" service.

2. MCHI is a Delaware corporation. The majority of its voting stock (67.19%)
held by DC Limited Partnership ("DCLP"), another Delaware corporation. A U.S. citi
David Castiel, holds 53.6% of the stock of DCLP and is its sole officer and directo
Castiel is also the Chairman and CEO of MCHI. The other principal MCHI stockholder
Venture First Associates, with 13.25%, and Israel Aircraft Industries Ltd. ("IAI"),
12.98%.

3. MCHI's system, which it calls "ELLIPSO", will consist of sixteen non-
geostationary satellites arrayed in three orbital planes. Two constellations of fi
each will be placed in inclined elliptical orbits. A third constellation of six sa
placed in circular equatorial orbit. The system will use Code Division Multiple Ac
("CDMA") technology. MCHI expects that the system will include four fixed gateway

stations in the United States that will afford interconnection and perform billing, management, and satellite-control functions. Messages transmitted from subscribers terminals will be relayed via ELLIPSO satellites to the gateway stations, where they are analyzed for purposes of routing and billing and fed into the terrestrial telecommunication network. The system will be used to provide two-way voice and value-added data services including geolocation, paging/messaging, fax, and remote monitoring.

4. In accordance with the Big LEO service rules, MCHI proposes to use the 2483.5-2500 MHz band for transmission from the satellites to mobile terminals and plans to use the 1610-1621.35 MHz band for transmission to the satellites from mobile terminals within the United States. It also proposes to use 6875-7075 MHz for feederlink transmission from gateway stations to the satellites and 15.45-15.65 GHz for feederlink transmission from gateway stations to the satellites.

Discussion

A. Financial Qualification

5. MCHI's predecessor in interest was one among six parties that applied in 1993 for authority to use the 1610-1626.5 MHz and 2483.5-2500 MHz bands for Mobile Satellite Service ("MSS"). Those spectrum bands were internationally allocated for MSS at the ITU World Administrative Radio Conference ("WRC"), and the FCC adopted a conforming domestic allocation in 1993. In October 1994, the Commission issued a Report and Order ("Big LEO Report and Order") promulgating technical, licensing, and operational rules for Big LEO service, in which it concluded that five Big LEO systems -- one fewer than the number of applicants -- could be accommodated in the 1.6/2.4 GHz MSS bands. Because the band-sharing plan could not accommodate all of the pending applications and leave no spectrum available for expansion of existing systems or the development of future systems in the United States, the Commission adopted a strict financial-qualification requirement for Big LEO applicants. Applicants were required to demonstrate that they could meet the costs of building and launching all proposed system space stations and meet operating expenses for one year after the launch of the first satellite. More specifically, applicants were required either to show that the value of its current assets and operating income for the most recent fiscal year exceeded the relevant costs, or show that it had obtained and negotiated, non-contingent financial commitments sufficient to cover those costs.

6. The Big LEO Report and Order established a two-tier processing rule. Applicants demonstrating financial qualification in amendments filed by November 16, 1994 would be processed on a first priority, but those unable to meet the requirement at that time would have until November 31, 1996 to comply. Five of the six Big LEO applicants, including MCHI, filed financial qualification amendments on the first-tier deadline. (The sixth, AMSC, elected to withhold financial information pending the second-tier deadline.) In a series of decisions released on November 31, 1995, the International Bureau found three Big LEO applicants financially qualified and granted them licenses to construct, launch, and operate their proposed satellites. In other decisions issued on the same date, the Bureau ruled that the financial information filed by MCHI and Constellation Communications, Inc. was insufficient. The second-tier deadline was later postponed pending disposition of MCHI's application for Commission review of the Bureau's assessment of its initial financial showing and was ultimately reset to September 1, 1997.

7. MCHI and Constellation both filed additional financial amendments on September 16, 1996, but AMSC did not. Consequently, by letter dated January 31, 1997 the Bureau's Chief dismissed AMSC's application. AMSC has not requested reconsideration of the dismissal or asked the Commission to review it.

8. MCHI indicated in its September 1996 amendment that its previous cost estimates of \$256 million for building the ELLIPSO satellites, \$300 million for launching, and \$1 million for first-year operating expense were still valid. Regarding funding, MCHI continued to rely on previously-reported financial commitments from IAI, Spectrum Networks Systems ("SNS"), Arianespace, AEC-Able Engineering Co., Inc., and Spectrum Astro. IAI also reported that it had secured additional commitments for funds that, in the aggregate, exceeded its total cost requirement by a wide margin. MCHI Chairman David Castiel filed an affidavit that MCHI had negotiated contracts with an Egyptian firm named ARTC Suez and a South African corporation named Vula Communications (Pty) Limited ("Vula") in which those companies had agreed to pay MCHI \$350 million and \$300 million, respectively.

for rights to market ELLIPSO services in certain regions of Africa and the Middle E also averred that MCHI had secured a contractual \$300 million vendor financing comm from a consortium including the State Design Office Yuzhnoye of Ukraine, covering 1 of all the first-generation ELLIPSO satellites. MCHI contended that its amended sh was sufficient but requested a waiver of the financial standard in the event that t Commission were to conclude otherwise.

9. MCHI filed copies of the contracts with Vula, ARTOC Suez, and Yuzhnoye und separate cover, together with another contract pertaining to a previously-reported financing commitment from Spectrum Astro, Inc., a satellite manufacturer. In an as "Request for Confidential Treatment," MCHI asserted that the contracts contained hi confidential information and asked the Commission to return them if it agreed that of such material was unnecessary for compliance with the financial-qualification ru alternative, MCHI requested an opportunity to redact non-relevant terms in the docu before they were placed in the public files and that a protective order be issued l access to them.

10. In a letter dated October 29, 1996, the Chief of the International Bureau MCHI that the financial-qualification rules do not require applicants to submit cop business agreements and that the documents in question would therefore be returned, requested. The Bureau Chief noted, however, that insofar as the agreements contain relevant information their withdrawal might materially undermine MCHI's financial s He therefore allowed MCHI to resubmit such information in a format suitable for pub disclosure. MCHI then filed a supplement, on November 13, 1996, containing letters commitment from Vula, ARTOC Suez, Yuzhnoye, and Spectrum Astro in lieu of the previously-submitted contracts. The letter from Yuzhnoye was co-signed by the pres an Indonesian company, P.T. Tigamutiara Buanakhatulistiwa ("TMBK"), and indicated t the latter had given an alternative commitment to provide launch service.

11. MCHI's amendment, as supplemented, was placed on public notice on Novembe 27, 1996, and the existing Big LEO licensees -- Motorola Satellite Communications, L/Q Licensee, Inc., and TRW Inc. -- filed petitions to deny. The petitioners conte MCHI had not met the financial qualification standard and that there was no good re granting its request for a waiver. MCHI filed a Consolidated Opposition on January 1997, in which it submitted additional information concerning the financial commitr from Vula, ARTOC Suez, TMBK, and SNS. The petitioners filed replies on February 11 which they maintained, again, that MCHI's showing was materially deficient and that waiver should not be granted. On February 27, MCHI supplemented its showing once r by filing a letter signed by Vula's Chairman and its Managing Director. Petitioner Motorola filed motions to strike the letter, to which MCHI filed an opposition on M In a letter to the Commission's secretary dated April 16, 1997, MCHI reported that engaged in further negotiations that might affect the terms of its agreement with A Suez and that, in order to preserve flexibility in negotiating with that company an additional investors, it wished to rescind its designation of ARTOC Suez as a finan for purposes of financial qualification.

12. We find MCHI's financial showing to be insufficient. One notable shortco is the absence of a current balance sheet. MCHI has not submitted an updated balan since November 1994, although Subsection 25.140(d) requires submission of one that "current for the latest fiscal year." Another significant deficiency is that MCHI shown that investors on which it relies for funding are capable of meeting their fi commitments.

13. It has not shown, for instance, that Vula is capable of paying \$350 milli regional distribution rights. MCHI has not produced any definite information as to of Vula's assets, nor has it shown that Vula has secured firm commitments from thir to supply funds that could be used to pay MCHI. A chartered accountant asserts in reproduced in one of MCHI's exhibits that the combined assets of Vula's shareholder worth more than \$350 million, but this is immaterial, as there is no evidence that shareholders could be held liable for Vula's debts or that they have firmly committ contribute any definite and substantial amount to its corporate treasury.

14. It is likewise unclear whether Spectrum Astro is capable of meeting its commitment. Spectrum Astro has contracted to build the ELLIPSO satellites for \$256 and has agreed to accept delayed payment of \$206 million of that sum in installment five-year period starting six months after the ELLIPSO system commences commercial operation. MCHI therefore claims credit for \$206 million of vendor financing. Tha Spectrum Astro, a company with a ten-year record of successful performance as a sat

construction contractor, has made a contractually-binding commitment to build the service on credit lends plausibility to the arrangement, but it is not clear how Spectrum Astro meet the cash requirement that its commitment entails. Spectrum Astro's president, Thompson, acknowledges in a signed statement that his company will incur \$134 million out-of-pocket expense to build the satellites and reports that it relies on a financial commitment from a Brazilian corporation, Interacoes Urantia-Cajai, Ltd., which has provided up to \$206 million in return for a profit-sharing arrangement with Spectrum Astro. Mr. Thompson further reports that he has ascertained from verified financial statement property appraisal by a Brazilian-government agency (copies of which are attached to Thompson's declaration) that Interacoes' president, Dr. Israel Marques Cajai, has a net worth collectively worth far more than \$206 million. There is no showing, however, as to the value of Interacoes' assets, nor has MCHI produced any evidence that Spectrum Astro has a personal financial commitment from Dr. Cajai.

15. MCHI represents that it has secured \$300 million of vendor credit for launch service from an Indonesian company, TMBK, described as "a member of the Mertju Buana Group, a major industrial and agribusiness conglomerate." A supporting letter dated November 9, 1996 from a TMBK representative indicates that TMBK has contracted to launch all sixteen ELLIPSO satellites for \$300 million, payable in ten semiannual installments, the first of which would not be due until six months after the ELLIPSO begins providing commercial service. The letter further indicates that TMBK plans to establish a commercial launch center in Indonesia but that it has agreed to arrange financing for launching at an alternative site on the same terms in the event that development of an Indonesian launch center does not proceed as planned. The letter is co-signed by a representative of the State Design Office Yuzhnoye of the Ukrainian Ministry of Defense, which would evidently provide the alternative facility. MCHI has submitted a letter from a bank asserting that the assets and operating income of TMBK and the Mertju Buana Group exceed \$300 million, but there is no information as to the resources of TMBK alone. Aside from a vague statement in the unattested November 9 letter that TMBK "is supported by" the Group's financial resources, which is not confirmed by any communication from an officer of the Group itself, there is no evidence as to the nature and extent of any relevant commitment from Mertju Buana.

16. SNS is an Australian company that owns one percent of MCHI's common stock and has signed an agreement with MCHI concerning regional distribution rights. In a letter dated January 22, 1997, SNS's Chairman represents that SNS "is prepared to expend the necessary funds to construct, launch, and operate the Ellipso satellite system for which could be construed as a commitment to provide up to the entire amount of funds needed to cover MCHI's estimated costs. According to a balance sheet in one of MCHI's exhibits, however, the total value of SNS's current assets is only \$24.6 million, a fact which provides no evidence that SNS has access to any definite amount of additional funds from outside sources for purposes of investment in ELLIPSO.

17. In light of the dearth of evidence that Vula, SNS, Spectrum Astro, and TM are financially capable of fulfilling their funding commitments to MCHI, the petitioner argues that those commitments should not be counted to MCHI's credit for purposes of assessing the financial-qualification standard. MCHI argues, on the other hand, that the dearth of such evidence is immaterial, stressing that Subsection 25.140(c) does not explicitly require applicants to produce information as to the financial capability of outside investors or financiers.

18. While it is true that the rules do not explicitly require applicants to rely on outside financial backing to demonstrate that the parties from which they have secured funding commitments are capable of fulfilling them, we do not agree with MCHI that applicants need not furnish such information in order to establish financial qualification. The basic requirement is plainly stated in Subparagraph 25.143(b)(3):

Each applicant for a space station system authorization in the 1.6/2.4 GHz mobile-satellite service must demonstrate, on the basis of the documentation contained in its application, that it is financially qualified to meet the estimated costs of the construction and launch of all proposed space stations in the system and the estimated operating expenses for one year after the launch of the initial space station.

This rule provision was adopted as a means of ensuring that licensees will be able to provide new service. MCHI's interpretation does not comport with that intention. Accepting the theory that applicants need not produce evidence that financial backers can fulfill

commitments would vitiate the financial qualification requirement. Commitments from putative investors of unknown capability afford scant assurance that an applicant is to implement its proposal.

19. MCHI's view is also contrary to relevant case precedent. The financial qualification rule currently set forth in Subsection 25.140(c) is patterned on the standard that had long been applied in broadcast cases. In administering that standard, the Commission routinely required applicants to submit balance sheets or financial statements from financial backers. It later adopted a policy of permitting broadcast applicants to certify, in the first instance, rather than demonstrate with evidence, that they were qualified, but it continued to insist that applicants relying on loan commitments from other than financial institutions obtain probative evidence of the prospective lender's ability to make the loans. Our recent Echostar decision confirms that the same principle applies in satellite cases: a satellite applicant must produce evidence that a financial backer is providing the promised funds.

20. MCHI has not shown that the financial commitments from Vula, Spectrum Ast and TMBK are reliable and has not shown that SNS can be relied upon to provide more than \$24.6 million. The other commitments on which it purports to rely -- from IAI, Arianespace, and AEC-Able -- are also insufficient. MCHI has produced nothing to bolster its previous showing concerning the commitment from IAI, which this Bureau and the Commission have both found inadequate in earlier decisions. MCHI would receive \$45 million of vendor-financing credit from Arianespace if it were to commission that company instead of TMBK, to launch its satellites, but the credit would cover only a small portion of the \$300 million fee that Arianespace would charge for launch service, leaving MCHI with a net cost of \$255 million. As for the commitment from AEC-Able Engineering, MCHI has presented evidence that that company agreed to discount the price it would charge to manufacture arrays for the ELLIPSO satellites by \$28 million in exchange for an equity interest. It appears, however, that the discount is already reflected in MCHI's estimate of the cost of the arrays, and therefore should not be counted as further reducing its cost requirements. In the total sum, MCHI has not demonstrated with requisite certainty that it has access to more than \$69.6 million (\$24.6 million from SNS and \$45 million from Arianespace) to meet its estimated cost of \$564 million.

21. Waiver request. MCHI states five reasons for waiving the financial requirements. First, it argues that with the dismissal of AMSC's application it has become possible to license both of the remaining Big LEO applications, i.e., MCHI's and Constellation's, consistent with the Commission's determination in the Big LEO Report and Order that four CDMA systems can be licensed to share the 1610-1621.35 and 2483.5-2500 MHz bands. This change of circumstance, it contends, obviates the Commission's concern that licensing an under-capitalized applicant might prevent a more capable applicant from going forward. Second, MCHI argues that granting its application would be more efficient administratively and more likely to lead to earlier initiation of service than denying it and inviting new applicants. Third, MCHI asserts that granting its application would foster beneficial development in foreign countries; in particular, it alleges that the ELLIPSO system would enhance telecommunications infrastructure in Sub-Saharan Africa and that Vula's participation would advance Black empowerment in South Africa. Fourth, MCHI asserts that, by virtue of its innovative design, the ELLIPSO system would be more cost-effective than any rival Big LEO system and hence that it, unlike any other Big LEO operator, would be able to provide service at prices comparable to the pricing of terrestrial cellular service. Fifth, MCHI contends that granting its waiver request would facilitate market entry by an entire class of small businesses, consistent with the mandate in Section 257 of the Communications Act concerning elimination of market barriers in order to promote diversity, economic competition, and technological advancement. Finally, MCHI maintains that it has demonstrated by its persistence in the six years that have ensued since it filed its application that it is earnestly committed to implementing the ELLIPSO system and is motivated by a hope of speculative gain from license trafficking. It stresses in that regard that it has spent millions of dollars on ELLIPSO design and marketing and established supporting business relationships around the world, has procured a patent on the system design, and has turned down offers from larger companies to purchase a controlling interest in the enterprise.

22. The petitioners argue, in opposition to the waiver request, that: (1) the public interest in mutual exclusivity is not of crucial importance, as the Big LEO Report and Order predicate application of a strict financial standard merely on the presence of mutual exclusivity; (2) if financial waivers are granted for MCHI and Constellation, AMSC will seek reinstatement of its application, which could lead to a reestablishment of mutual exclusivity; (3) past examples of procrastination by under-financed applicants coun-

granting financial waivers here; (4) forcing the existing Big LEO licensees to coordinate systems unlikely to be built would be unduly burdensome; (5) attempting coordination underfinanced Big LEO system would undercut the United States' ability to oppose other governments' "paper" systems; (6) MCHI's invocation of Section 257 is misplaced because it has never proven that it qualifies as a small business for purposes of that statute; (7) MCHI's contentions about benefits to competition and international development are question-begging, as they presuppose that MCHI will succeed in implementing its plan; (8) entry by MCHI is not necessary for effective competition.

23. Waivers are appropriately granted when such relief would not undermine the policy objective of the rule in question and would otherwise serve the public interest. The Commission promulgated the financial qualification standard for Big LEO applicants to ensure that license grants to under-financed applicants would not preclude fully-qualified applicants from implementing their proposals, experience having shown that licensees with sufficient available resources at the outset typically spend considerable amounts of time trying to raise the necessary financing and that such attempts often end unsuccessfully. Where a grant to one applicant would not prevent another from going forward, however, the Commission has been less exacting. When the Commission adopted the financial qualification rule for the Big LEO service, in October 1994, six applicants were permitted to use the 1.6/2.4 GHz bands for voice-and-data MSS, although the Commission had determined that only five such systems could feasibly occupy that spectrum. At that time, moreover, there was no other available spectrum for comparable service; the only other spectrum domestically allocated for MSS was either already occupied or was in bands not suitable for voice transmission. Because all pending Big LEO applicants could not be accommodated because there was no apparent prospect of expansion or future entry, the Commission concluded that it was necessary to impose a strict financial qualification requirement.

24. Neither of the key circumstances on which the Commission predicated that its conclusion still holds true. As a result of the dismissal of AMSC's application, the Commission no longer has any mutual exclusivity between pending Big LEO applications. Two applications remain, MCHI's and Constellation's, and both of them can be accommodated under the Commission's band-sharing plan for the 1.6/2.4 GHz MSS spectrum. There is now an opening for future entry, moreover. As a result of the Commission's allocation of spectrum to MSS at 1990-2025 MHz and 2165-2200 MHz, in March of this year, unassigned spectrum with equivalent propagation characteristics is now available, either for new or for expansion of existing systems, that could be used to provide service such as Big LEO systems would provide. In light of these developments, MCHI's waiver request is granted without prejudice to the objectives that the Commission sought to promote by adopting the Big LEO financial standard.

25. The remaining question is whether granting the waiver request would otherwise comport with the public interest. We conclude that it would. Entry by MCHI could further the Commission's goal of fostering developments affording consumers the widest feasible range of choices in service available at the earliest possible date. We note in this regard that MCHI's constellation design is substantially different from the designs of the other Big LEO systems and that its marketing strategy, based on the ostensible advantages of its system design, is also apparently distinctive in some respects. Affording MCHI a license to carry out its proposal might therefore result in significant enhancement of commercial competition, to the benefit of consumers.

26. With respect to concerns that waiving the financial qualification requirement would make it difficult for the U.S. government to effectively oppose efforts by other governments to promote "paper" systems, it should be borne in mind that MCHI will be required to adhere to construction-progress "milestone" schedules. In the Big LEO Order, the Commission required each Big LEO space-station licensee to adhere to a timetable for implementation of its proposal. More specifically, it said that unless an applicant demonstrated a special need for additional time it would be required to begin construction of its first two satellites within one year after receiving a feeder link authorization, to begin construction of the remaining authorized satellites within the same date, to complete construction of the first two satellites within four years, and to place the entire system into operation within six years. To ensure compliance, the Commission adopted rule provisions requiring Big LEO licensees to file annual progress reports certifying within ten days after each milestone date that the milestone requirement has been met or else report that it was missed. Therefore, consistent with our action in recent years granting space-station feeder-link authorizations to Motorola, L/Q, and TRW, we are incorporating a milestone timetable in the terms of MCHI's license. We will carefully monitor its progress toward implementation and will not hesitate to cancel the license if it fails without justification to meet the prescribed milestone schedule, as has been

other cases.

27. The additional coordination burden that the existing CDMA Big LEO license would have to bear in the event that MCHI is licensed is a legitimate concern, but that we view as dispositive of the waiver issue. As TRW correctly asserts, in order to facilitate spectrum-sharing in the 1610-1621.35 MHz and 2483.5-2500 MHz bands the CDMA licensees must make adjustments that reduce each system's capacity, and the more systems there are to be accommodated in the shared bands the less capacity each system can have. Hence, if additional licenses are issued, the two existing CDMA licensees will have to negotiate a sharing arrangement leaving them with less capacity than they would otherwise have. TRW cannot rightly contend, however, that it has proceeded in a justifiable manner on the assumption that it would share the 1610-1621.35 MHz and 2483.5-2500 MHz bands with only one other CDMA system. The MCHI and Constellation applications proposing CDMA operation have been pending at all relevant times in this proceeding, both before the issuance of licenses to TRW and L/Q. TRW agreed with MCHI, Constellation, and L/Q comments and joint proposals filed with the FCC in 1993 and 1994, moreover, that four CDMA systems could feasibly share those bands for service-link transmission, and the Commission accordingly adopted a spectrum-sharing plan for the Big LEO service that would license four such systems to be licensed. TRW subsequently modified its satellite design to gain flexibility in band assignment, traffic management, and interference mitigation. TRW stated its purpose of enhancing the system's ability to share spectrum with other CDMA systems; thus, it has already made allowance in its system design for coordination with multiple-system spectrum-sharing arrangements. It appears, moreover, that the amendment of the Odyssey system affords substantial flexibility for operational adjustment to accommodate other systems. This belies the unsupported implication in TRW's Petition to Deny that coordination with MCHI would encumber it with irreversible operational constraints that could not be eliminated or mitigated in the event that MCHI fails to implement its proposal. In the full Commission has determined in a rulemaking that four systems can feasibly share the 1.6/2.4 GHz spectrum bands allocated for Big LEO CDMA service-link transmission, and we see no sufficient reason for concluding otherwise at this point.

28. One potential difficulty is worth mentioning, however. The Commission noted in the Big LEO Report and Order that the RTCA, Inc., an advisory committee to the FAA, charged with developing recommendations for protecting GLONASS operations below 161 MHz, when used as part of the Global Navigation Satellite System (GNSS) for precision approach and landing, from out-of-band interference from transmissions of MSS mobile transceivers in the 1610-1626.5 MHz band. Although no consensus in this regard has emerged from the RTCA's deliberations, representatives of the aeronautical industry advocated adoption of out-of-band emissions limits that could hinder one or more of the Big LEO systems from using the lower portion of the 1610-1626.5 MHz band. The consequent reduction of Big LEO system capacity might call into question the premises for the Commission's determination that five systems can be accommodated, and our action here without prejudice to any subsequent measures deemed necessary in light of further developments concerning out-of-band protection for GLONASS receivers used for precision approach and landing. In light of the fact that our waiver of the financial qualification requirement is predicated on the availability of adequate spectrum for five systems in the 1.6/2.4 GHz bands and for expansion or new entry in another band, if regulatory decisions concerning protection of GLONASS receivers diminish the amount of spectrum available to the CDMA Big LEOs, we will consider whether MCHI and Constellation should bear the principal burden of any operating constraints. In any event, we anticipate that MCHI will exhibit flexibility regarding any intersystem coordination concerns that may arise from regulatory decisions concerning protection of GLONASS receivers. If the ELLIPSO mobile terminals cannot transmit in a lower segment of the 1610-1621.35 MHz band compatible with the out-of-band emissions limits adopted hereafter by the Commission, MCHI should not expect that adjustments will be required of CDMA systems capable of compatible operation in a wider portion of the band in order to equalize system capacity.

B. Alleged Abuse of Process

29. In a pleading captioned "Response and Request for Supplemental Briefing", on May 9, 1997, Motorola contended that an inquiry should be conducted to determine whether MCHI has sought to bring improper influence to bear on this proceeding by inviting third parties to send ex parte communications to decision-making personnel and, if necessary, whether its application should be denied for that reason. TRW and L/Q espoused the contention in comments filed on May 13 and 15. On May 14, TRW reiterated the contention in a Request for Investigation addressed to the FCC's General Counsel. There is no discussion of the issue here, except to note that in a letter dated June 27 the Office of

Counsel, after reviewing this matter, declined to sanction MCHI, concluding that no was warranted aside from warning it that when a party's actions could lead to the presentations by others concerning a matter in a restricted proceeding it should be aware of the restricted status of the proceeding in order to prevent impermissible presentations being made.

C. Technical Considerations

30. Compliance with 25.143(b). Subsection 25.143(b) of the FCC's rules sets certain requirements that a Big LEO applicant must meet in order to be found technically qualified. It must: (1) specify a non-geostationary satellite-system design; (2) demonstrate that the system will be capable of providing mobile satellite service to all locations between 70 North latitude and 55 South latitude for at least 75 percent of every 24-hour day; (3) demonstrate that the system will be capable of providing continuous service through fifty states, Puerto Rico, and the U.S. Virgin Islands; and (4) demonstrate that the system will operate in compliance with applicable requirements in Section 25.213 concerning interference protection. MCHI's application, as amended, meets all of these requirements.

31. Service-link Polarization. MCHI proposes to use righthand circular polarization (RHCP) for service-link transmission in both directions. We have previously authorized TRW to use RHCP for space-to-earth service links. Constellation, in its application we are granting today in a companion order, is also proposing to use RHCP. Thus, three of the four CDMA Big LEO licensees are planning to use RHCP for transmission in the shared 2.4 GHz band. It is preferable for minimizing inter-system interference that the Big LEO systems sharing that band operate with opposite service-link polarization to the extent possible; if four systems are to share the band, then it would be best for two to use RHCP and two to use LHCP. Pursuant to the inter-system coordination policy announced in the Big LEO Report and Order, we will leave it to the licensees, in the first instance, to resolve the problem by agreeing on a mutually-compatible scheme of polarizations.

32. Space-to-earth feeder links. MCHI's specification of the 6875-7075 MHz band for space-to-earth feeder-link transmission is consistent with the ITU's international frequency allocations, as amended at WRC-95, but not with the U.S. domestic table of frequency allocations, which currently reserves the spectrum between 5925 and 7075 MHz for terrestrial services and Earth-to-space transmission in the Fixed-Satellite Service. Consistent with analogous action in the order granting L/Q's request for space-to-earth feeder-link authorization, we will waive the rule that normally requires operating frequencies to be assigned consistently with the U.S. Table of Frequency Allocations so as to permit the licensee to make use of spectrum that has been allocated internationally for MSS feeder links, any pertinent restrictions subsequently promulgated in a rulemaking to consider amendments to the U.S. Table of Allocations to conform to the international allocations in this band.

33. MCHI's specification of the upper portion of the internationally-allocated 6875-7075 MHz MSS feeder-link band is problematic, however, in light of other claims on that spectrum. L/Q is already licensed to use 6875-7055 MHz for space-to-earth feeder-link transmission for its "Globalstar" system, and Constellation, which is receiving a B license today, similarly specifies 6875-7025 MHz for space-to-earth feeder links. Whether more than two MSS systems could use the same 6/7 GHz frequencies for co-directional feeder-link transmission without causing unacceptable mutual interference is uncertain. Computer simulation studies conducted in preparation for WRC-95 indicated that two MSS systems could feasibly share spectrum for co-directional feeder-link transmission if sufficient data was available to support a conclusion as to the feasibility of bidirectional or co-directional sharing between three or more systems. We therefore grant a conditional authorization for space-to-earth feeder-link transmission in the 6875-7075 MHz band; before commencing operation MCHI must demonstrate that it can feasibly share spectrum with all other persons or organizations with full or conditional authority over that part of it for feeder-link transmission to gateway stations in the United States. Also to be addressed are international coordination issues with respect to use of these frequencies to be addressed prior to commencement of ELLIPSO operation.

34. Earth-to-space feeder links. MCHI proposes to use the frequency band 15.43-15.65 GHz for transmission from gateway stations to the ELLIPSO satellites. That band is internationally allocated for MSS Earth-to-space feeder links at WRC-95, but that allocation may be modified at WRC-97. Pursuant to a resolution adopted at WRC-95 calling for studies regarding spectrum-sharing by 15 GHz MSS feeder uplinks and the aeronautical mobile service, an ITU-R study group has advocated that the allocation for Earth-to-space feeder links be shifted to 15.43-15.63 GHz and be made subject to certain emission

The study group's findings were presented to the CPM-97 and are published in its report, and the proposal has also been recommended by the WRC-97 Advisory Committee. As MCHI's specification of 15.45-15.65 GHz is consistent with the current international allocation, we are granting authority for construction, launch, and operation of the satellites configured for use of that band for reception of Earth-to-space feeder-link transmission, with a proviso that the authorization will be subject to any pertinent shift adopted at WRC-97. This authorization should not be construed as a license for Earth-to-space transmission at 15 GHz; such authority must be requested in an Earth-station application filed pursuant to 47 C.F.R. 25.130. Authorization for operation at 15 GHz will be subject to any pertinent restrictions promulgated in a rulemaking to consider an update to the U.S. Table of Allocations, which does not currently allocate a 15 GHz frequency band for MSS feeder links, to conform it to the international allocation table in this respect. Coordination with respect to affected governmental systems must be conducted as required by 47 C.F.R. 25.131 and 25.203 by applicants for Earth station authorizations in the

35. Earth-to-space service links. Under the Commission's band-sharing plan for Big LEO service, the 1610-1621.35 MHz band is currently available for assignment to mobile terminals to ELLIPSO satellites. (In order to secure authorization for such transmission MCHI must file a blanket application pursuant to Subsection 25.115(d) of the FCC's rules.) The Commission devised a contingent band sharing plan in the Big LEO Report and Order that was to take effect if use of the 1610-1621.35 MHz segment for Big LEO service in the United States were to be precluded in order to protect the GLONASS system. Accordingly, we indicated in the initial series of Big LEO license orders that in the event that 1610-1612 MHz became unavailable for Big LEO service, authorizations for the 1.6 GHz band would be subject to the contingent plan or any other plan adopted in response to pending petitions for reconsideration. In its subsequent decision on reconsideration of the Big LEO Report and Order, the Commission concluded in light of uncertainty as to domestic and international acceptance of GLONASS as part of the GNSS, that the contingent sharing plan was unnecessary. That determination has been contested in further petitions for reconsideration, however, and if it becomes apparent that interim domestic protection of GLONASS will be necessary, after all, it would be appropriate to review the concerns that have been raised about the previously-announced interim protection. Therefore, pending disposition of the petitions for reconsideration, we are imposing a condition on MCHI.

ORDERING CLAUSES

36. Accordingly, pursuant to authority delegated by Sections 0.241 and 0.261 of the FCC's rules, IT IS ORDERED that MCHI's request for waiver of Paragraph (b)(3) of Section 25.143 of the rules IS GRANTED.

37. IT IS FURTHER ORDERED that Application File Nos. 9-DSS-P-91(87), CSS-91-010, 43-DSS-AMEND-92, 15-SAT-LA-95, and 16-SAT-AMEND-95 IS GRANTED, and MCHI IS AUTHORIZED to construct a mobile satellite system capable of operating in the 1610-1626.5/2483.5-2500 MHz frequency bands, with feeder links in the 6875-7075 MHz frequency band (space-to-Earth) and the 15.45-15.65 MHz band (Earth-to-space), in accordance with the technical specifications set forth in its application and the conditions set forth in the preceding paragraphs and consistently with our rules unless specifically stated herein. In the event, however, that 15.43-15.63 MHz is internationally allocated for feederlinks at WRC-97, in lieu of 15.45-15.65 MHz, MCHI IS AUTHORIZED to construct the satellites for reception of Earth-to-space transmission at 15.43-15.63 MHz.

38. IT IS FURTHER ORDERED that MCHI IS AUTHORIZED to launch and operate 16 non-geostationary satellites during the license term for the purpose of providing satellite service in the United States in the 1610-1621.35/2483.5-2500 MHz frequency band using the 6875-7075 MHz band for space-to-Earth feeder-link transmission, subject to the conditions stated herein, in accordance with the technical specifications set forth in its application, and consistently with our rules unless specifically waived herein. In the event that the 1610-1612 MHz band is not available for mobile satellite service operation in the United States, MCHI IS AUTHORIZED to operate in the 1612-1622.60/2483.5-2500 MHz frequency bands subject to the interim sharing plan outlined in 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 FCC Rcd 5936 49-53 (1994), and revisions, if any, adopted in response to petitions for reconsideration of that plan.

39. IT IS FURTHER ORDERED that MCHI IS AUTHORIZED to construct and

launch technically-identical replacement satellites during the license term.

40. IT IS FURTHER ORDERED that MCHI IS AUTHORIZED to offer space segment capacity on its satellite system on a non-common-carrier basis.

41. IT IS FURTHER ORDERED that the license term for the space stations is ten years, commencing 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 of the satellite in an authorized frequency band has occurred.

42. IT IS FURTHER ORDERED that, unless extended for good cause shown, this authorization will become null and void in the event that the licensee fails to meet the following progress schedule:

	Construction Commenced	Construction Completed	Fully Operational
First two system satellites	July 1998	July 2001	
Remaining system satellites	July 2000		Jul

43. IT IS FURTHER ORDERED that this authorization is subject to completion of consultations under Article XIV of the INTELSAT Agreement and Article 8 of the INMARSAT Convention. Upon completion of the 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 agency will be required.

44. IT IS FURTHER ORDERED that MCHI shall prepare any necessary submissions to the International Telecommunication Union (ITU) and to affected administrations for coordination of the ELLIPSO space stations pursuant to the ITU's Radio Regulations.

45. IT IS FURTHER ORDERED that the assignment of orbital planes or particular frequencies to MCHI 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 the rights granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act, and the rights granted herein are subject to the use or control conferred by 47 U.S.C. 706.

46. IT IS FURTHER ORDERED that the motions to strike filed on March 4, 1997 by TRW Inc. and Motorola Satellite Communications, Inc. ARE DENIED, that MCHI's Request for Expedited Action filed on May 5, 1997 IS GRANTED to the extent indicated here and OTHERWISE DENIED, and that Motorola's Request for Supplemental Briefing, filed on May 9, 1997, IS DENIED.

FEDERAL COMMUNICATIONS COMMISSION

Peter F. Cowhey
Chief, International Bureau

Richard M. Smith
Chief, Office of Engineering and Technology