

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

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Federal Communications Commission
Office of the Secretary

In the Matter of)

Establishment of an Advisory)
Committee to Negotiate Proposed)
Regulations for Low-Earth Orbit)
Satellite Services Operating)
Below 1 GHz)

CC Docket No. 92-76

Jointly Filed Comments of ORBCOMM, STARSYS and VITA

In order to expedite the introduction of innovative low-Earth orbit satellite services which will provide new and less costly services to the public, the Commission recently proposed to establish an Advisory Committee to negotiate proposed technical and service rules appropriate to Non-Voice Non-Geostationary Satellite Services operating in low-Earth orbit ("LEO") in the bands below 1 GHz specified by the Commission.^{1/} Orbital Communications Corporation ("ORBCOMM"), STARSYS Global Positioning, Inc. ("STARSYS") and Volunteers in Technical Assistance, Inc. ("VITA"), the applicants for the proposed

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^{1/} Public Notice, DA 92-443, released April 16, 1992. The Commission had earlier proposed allocating spectrum for low-Earth orbit satellite services. Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum to the Fixed-Satellite Service and to the Mobile-Satellite Service for Low-Earth Orbit Satellites, ET Docket No. 91-280, FCC 91-305, released October 18, 1991 (hereinafter "Allocation NPRM").

service (collectively the "Applicants"),^{2/} are jointly filing these comments on the Commission's proposal to use a Negotiated Rulemaking for the promulgation of proposed regulations.

As an initial matter, the Applicants applaud the Commission's initiative in proposing to utilize Negotiated Rulemaking Act^{3/} procedures as a means of expediting the adoption of rules for these valuable services. Particularly in light of the positive attention that small LEO satellite services received at the recently completed World Administrative Radio Conference (WARC) and the strong public interest in expediting these services, it is imperative that the Commission continue to move ahead quickly in order to maintain the U.S. lead in this promising new small satellite technology.

The Applicants, in large part as a response to the FCC's proposal to utilize a Negotiated Rulemaking procedure, have held several informal meetings among themselves as a means of trying to reach agreement on technical and service rules for Non-Voice Non-Geostationary satellite services operating under 1 GHz.^{4/} Those meetings have proven to be very fruitful, and the

2/ A fourth applicant for the service, Leosat, had its application dismissed as untimely filed. Leosat Corporation, File No. 12-DSS-P-9-91(2), DA 92-463, released April 20, 1992.

3/ 47 U.S.C.S. §§ 594 et seq.

4/ In addition, the Applicants held informal discussions with representatives of the National Telecommunications and Information Administration's ("NTIA") Office of Spectrum Management with respect to the intergovernmental coordination aspects of the proposed rules for LEO satellite services operating below 1 GHz.

Applicants have reached agreement on the issues critical to the establishment of rules for the proposed service.^{5/}

Attached to these comments are the Applicants' proposed regulations to govern Non-Voice Non-Geostationary satellite services operating below 1 GHz in the bands identified in the Allocation NPRM. The rules largely draw on the preexisting Part 25 rules governing satellite services generally, and modify those regulations to accommodate the unique aspects of Non-Voice Non-Geostationary satellite services. The suggested rules would establish the application requirements, licensee qualifications and technical conditions for the Non-Voice Non-Geostationary satellite services proposed by the Applicants in their applications and petitions for rulemaking. In addition, the suggested rules will accommodate the non-commercial services proposed by VITA.

The suggested rules are structured as a new sub-Part to Part 25 of the Commission's Rules (along with some explicit cross-references between other relevant Part 25 provisions). Proposed Section 25.401 specifies the information to be provided in the application, including information demonstrating that the spectrum will be used efficiently (analogous to requirements for the domestic and international fixed satellite services).

^{5/} The agreement amongst the Applicants on the suggested service rules is predicated on the assumption that all three systems will be able to coexist. Although the Applicants encountered some last-minute problems with the sharing scheme preliminarily agreed to, the Applicants are optimistic that a suitable sharing arrangement can be crafted. The Applicants will keep the Commission apprised of relevant developments, and believe that the Commission should expeditiously issue the suggested rules as an NPRM.

Proposed Section 25.402 sets forth the eligibility requirements, and allows the applicant to request common carrier or non-common carrier status (with non-dominant treatment for common carriers). Proposed Section 25.403 specifies the license terms for the space stations comprising the systems and any replacement satellites. This provision is based on current Section 25.120, but has been adjusted to account for the fact that the Applicants anticipate that services will be provided by a constellation of Non-Geostationary satellites.

Proposed Section 25.404 specifies the renewal procedures and the renewal expectancy. These provisions are based closely on the renewal rules the Commission recently adopted in Part 21 for the Domestic Public Cellular Radio Telecommunications service, which also uses systems comprised of numerous radio stations. Proposed Section 25.405 details the financial qualifications, including the availability of a two-stage financial showing. Proposed Section 25.406 provides milestone conditions as a means of ensuring that spectrum is not warehoused, and is based on similar measures adopted in 1986 for the radiodetermination satellite service. Proposed Section 25.407 generally describes the frequency assignment policies that would govern multiple system operations in these bands.^{6/} Proposed Section 25.408 describes operating conditions to govern co-primary sharing of the bands with authorized governmental

^{6/} The suggested rule "brackets" the 399.9-400.05 MHz Transit band, in light of the uncertainty regarding that spectrum because of the absence of an international allocation of those frequencies for Non-Geostationary satellite services at the WARC.

users under NTIA's jurisdiction, and obviates the need for the five restrictive conditions set forth in proposed Footnote 320 set forth in the Allocation NPRM. Proposed Section 25.409 would allow blanket licensing of individual user transceivers, and is the functional equivalent of the provision applicable to user transceivers in the radiodetermination satellite service (47 C.F.R. §25.141(c)). Finally, Proposed Section 25.410 defines eligibility for applicants seeking to provide noncommercial services and specifies the particular conditions applicable to such services.

The Applicants also discussed their ability to coexist in the spectrum the Commission proposed to allocate to these Non-Voice Non-Geostationary satellite services. Based on the technical information exchanged among the Applicants, the Applicants believe that all three systems could be accommodated within the spectrum proposed to be allocated by the Commission. The Applicants will continue to discuss means of sharing the spectrum among themselves, and will keep the Commission informed as to the progress of those talks.

The Applicants believe that their efforts in developing proposed technical and service rules have obviated the need for the Commission to proceed with its proposed formal Negotiated Rulemaking procedure. In light of the current agreement of the Applicants with respect to suggested rules for Non-Voice Non-Geostationary satellite services operating below 1 GHz, the procedures proposed by the Commission have become unnecessary. Indeed, it would be counterproductive to the goal of expedition

shared by the Commission and the Applicants to proceed with a more formal process to reach agreement on suggested rules when the parties most significantly affected by any rules have already informally reached such an agreement.^{7/} In addition to imposing delay and being redundant, use of the formal Negotiated Rulemaking procedures would require the expenditure of scarce Commission resources in providing a facilitator and monitoring the process.

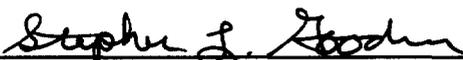
The Applicants thus respectfully request that the Commission decline to institute a Negotiated Rulemaking procedure, but instead release the Applicants' suggested rules in an NPRM as quickly as possible. Taking this step will allow all interested parties with an opportunity to comment on the proposed rules (thus providing procedural fairness), while also allowing service to become available in as rapid a manner as possible. In addition to release of the Applicants' suggested rules as an NPRM, the Applicants also urge the Commission to continue its efforts to expedite the availability of these important new services, including allocation of the spectrum as proposed in the NPRM and parallel processing of the applications with the adoption of service rules. The Applicants believe that this course of action will best serve the public interest.

In conclusion, the Applicants believe that the Commission's expressed desire to utilize alternative resolution mechanisms, including Negotiated Rulemakings, represents a

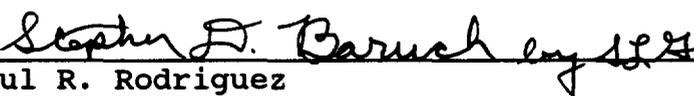
^{7/} Indeed, the suggested rules represent the consensus of all of the parties preliminarily identified in the Public Notice as participants in the Negotiated Rulemaking process.

positive and important step in the direction of streamlining government processes so as to expedite the introduction of important new technologies and services. Prompt release of a notice of proposed rulemaking containing these suggested licensing and service rules, the adoption of an allocation order, and parallel processing of the applications are the necessary and appropriate actions to further the public interest and the Commission's goals.

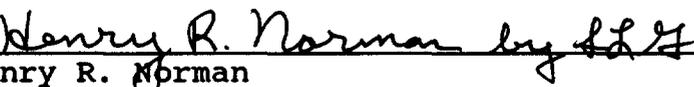
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**PROPOSED RULE PROVISIONS FOR THE
NON-VOICE NON-GEOSTATIONARY SATELLITE SERVICE (< 1 GHz)**

1. **Modify Section 25.114(c)(18) by adding the following sentence at the end of the subsection:**

Applications for non-voice non-geostationary satellite systems in frequency bands below 1 GHz shall provide the information required by Section 25.405.

2. **Add new subsection (27) to Section 25.114(c), as follows:**

(27) Applications for authorizations in the Non-Voice Non-Geostationary Satellite Service (< 1 GHz) shall also provide all information specified in § 25.401.

3. **Modify Part 25 of the Commission's Rules by Adding New Subpart F, as follows:**

§ 25.401. Space Station Application Requirements for the Non-Voice Non-Geostationary Satellite Service (< 1 GHz).

(a) Each application for a space station license in the Non-Voice Non-Geostationary Satellite Service (< 1 GHz) shall describe in detail the proposed Non-Voice Non-Geostationary Satellite system, setting forth all pertinent technical and operational aspects of the system, and the technical, legal, and financial qualifications of the applicant. In particular, each application shall include the information specified in Section 25.114, except that in lieu of the information concerning orbital locations requested in Section 25.114(c)(6), the applicant shall specify the number, altitude(s), argument(s) of perigee, service arc(s), right ascension of ascending node(s), and orbital plane(s) of the space stations that will comprise its system. Applicants must also file information demonstrating compliance with all requirements of this section, and demonstrating that they will not cause harmful interference to any authorized or licensed Non-Voice Non-Geostationary Satellite Service (< 1 GHz) system.

(b) Applicants for commercial systems in the Non-Voice Non-Geostationary Satellite Service (< 1 GHz) must demonstrate in their applications that within six years of the grant of a nonconditional construction permit, they will be able to provide service to the United States, with service being available at least 75% of the time. For purposes of measuring compliance with this provision, service is deemed to be available if there is the potential for a user transceiver to transmit and/or receive a message directly to or from a space station operated as part of a commercial system.

§ 25.402. Noncommon Carrier/Common Carrier Operation; Eligibility For License.

(a) Applicants for space station licenses in the Non-Voice Non-Geostationary Satellite Service (< 1 GHz) may request that the space stations in their proposed systems be licensed on either a noncommon carrier or a common carrier basis. Applicants for multiple space station licenses in the Non-Voice Non-Geostationary Satellite Service (< 1 GHz) must request either noncommon carrier status or common carrier status with regard to all space stations that would be operated as part of a single system.

(b) Common carrier Non-Voice Non-Geostationary Satellite Service (< 1 GHz) space station licenses shall be classified as nondominant carriers, and shall be subject to streamlined tariff filing and facilities authorization procedures under Parts 61 and 63 of the Commission's rules.

(c) The Commission will preempt any conflicting state regulations over technical standards and entry regulation of the space segment.

§ 25.403. License Term; Replacement Space Stations.

(a) Space Station License Term. The license terms for Non-Voice Non-Geostationary Satellite Service (< 1 GHz) space stations that are operated as a single system will begin simultaneously at 3 a.m. EST on the date that the licensee certifies to the Commission that the minimum number of space stations required to enable the licensee to conform the operations of its system fully to the terms and conditions of its instrument of authorization have been successfully placed into orbit. As additional space stations originally authorized as part of the system are brought into service, the expiration dates of the licenses of such stations shall be the date ten years after the date on which the licensee made the certification contemplated by this paragraph.

(b) Replacement Space Stations. In the case of Non-Voice Non-Geostationary Satellite Service (< 1 GHz) systems consisting of multiple space stations that are operated as a single system, or in the case of noncommercial space stations in the Non-Voice Non-Geostationary Satellite Service (< 1 GHz) (as provided for in Section 25.410), the licensee shall be authorized, upon application to the Commission, to construct, launch, and operate space stations to replace failed or retired space stations authorized as part of the original system. If an application for authority to launch and operate such a replacement space station is filed before the last date for submission of a renewal application, as set forth in Section 25.404, the license of said space station shall expire at the end of the license term of the space station it is to replace. If an application for authority to launch and operate a replacement space station is filed after the last date for submission of a renewal application, as set forth in Section 25.404, the license shall expire at the end of the renewal term if the renewal application is granted, or at such time as the Commission may otherwise determine if the renewal application is dismissed and/or denied.

§ 25.404. Space Station License Renewal.

(a) Space Station Renewal. A licensee of a Non-Voice Non-Geostationary Satellite Service (< 1 GHz) satellite system consisting of multiple space stations that are operated as a single system shall file a blanket application for renewal of the licenses of the space stations that comprise such system. A licensee of a noncommercial Non-Voice Non-Geostationary Satellite Service (< 1 GHz) satellite system, as provided for in Section 25.410, may file a blanket application for renewal of the licenses of the space stations that comprise such system. Renewal applications shall be filed by the licensee no earlier than ninety (90) days and no later than (30) days prior to the end of the sixth year of the license term.

(b) Renewal Expectancy. A Non-Voice Non-Geostationary Satellite Service (< 1 GHz) renewal applicant involved in a comparative renewal proceeding shall receive a preference, commonly referred to as a renewal expectancy, which is the most important comparative factor to be considered in the proceeding, if its past record for the relevant license period demonstrates that the renewal applicant:

- (1) Has substantially used its spectrum for its intended purpose;
- (2) Has substantially complied with applicable Commission rules, policies, and the Communications Act; and
- (3) Has not otherwise engaged in substantial relevant misconduct.

(c) Public Notice. All applications for renewal of licenses of space stations in the Non-Voice Non-Geostationary Satellite Service (< 1 GHz) shall be placed on public notice.

§ 25.405. Financial Qualifications.

(a) Each application for authority to construct, or to construct, launch, and operate a space station in the Non-Voice Non-Geostationary Satellite Service (< 1 GHz) shall include a detailed statement of the:

- (1) Estimated costs of proposed construction and/or launch, and any other initial expenses for the space station(s); and
- (2) Estimated operating expenses for one year after launch of the proposed space station(s).
- (3) The source(s) or potential source(s) of funding of the proposed system for one year, including the identity of financiers and their letters of financial interest, or other sources of funding.

(b) Applicants for multiple licenses of Non-Voice Non-Geostationary Satellite Service (< 1 GHz) space stations that would be operated as a single system must make the showings required in paragraph (a) of this section as to all of the space stations in their proposed systems, and the showing required by in paragraph (a)(2) shall be for the period commencing on the date that the licensee expects to be able to make the certification required by Section 25.403(a).

(c) Any applicant that makes the showing required in paragraph (a) or paragraph (b) of this section shall be found financially qualified to receive a conditional construction permit. A conditional construction permit for a space station(s) does not permit the applicant to commence construction of such station.

(d) In order to commence construction, an applicant must demonstrate its current financial ability to meet the costs specified in paragraph (a) of this section, by submitting the following financial information verified by affidavit:

(1) An applicant relying on internal funds to finance its system must submit a balance sheet current for the latest fiscal year and documentation of any financial commitments reflected in the balance sheet, together with an exhibit demonstrating that the applicant has current assets and operating income sufficient to satisfy the requirements of paragraph (a) of this section. If the applicant is owned by more than one corporate parent, it must submit evidence of a commitment to the proposed satellite program by management of the corporate parent(s) upon whom it is relying;

(2) An applicant relying on external sources of funding must submit the information called for in paragraph (d)(1) of this section, along with an exhibit indicating that the estimated income or revenues anticipated from the proposed operation of the Non-Voice Non-Geostationary Satellite Service (< 1 GHz) system are sufficient to meet the estimated construction, launch, and first year operating costs not met by internal funds, along with any additional information requested by the Commission, which would include scheduled debt financing or stock issues, established lines of credit or other forms of internal financing; provided, however, that applicants for noncommercial systems (as provided for in Section 25.410) relying on external funding may satisfy the requirement specified in this paragraph by submitting copies of grant commitment letters or other evidence of funding commitments.

§ 25.406. Milestones.

(a) All conditional permittees of space stations in the Non-Voice Non-Geostationary Satellite Service (< 1 GHz) must file the demonstrations required by Section 25.405(d) within one year after the grant of the conditional construction permit or, in the case of conditional permittees of space stations in the Non-Voice Non-Geostationary Satellite Service (< 1 GHz) that will provide international service, within sixty days after the State Department has notified the Commission that all applicable treaty obligations of the United States have been satisfied, whichever is later.

(b) Construction of the first space station in a Non-Voice Non-Geostationary Satellite Service (< 1 GHz) system must be commenced within one year after the grant of a nonconditional construction permit, and must be completed within four years after the grant of a nonconditional construction permit.

(c) Conditional permittees of multiple Non-Voice Non-Geostationary Satellite Service (< 1 GHz) space stations must satisfy the requirement of paragraph (b) of this section as to the first space station in their systems, and must commence construction of all remaining space stations required to make the certification called for in Section 25.403(a) within three years after the grant of a nonconditional construction permit.

(d) All space stations authorized for a Non-Voice Non-Geostationary Satellite Service (< 1 GHz) system, except stations authorized as on-ground spares, must be launched and operational within six years after the grant of a nonconditional construction permit.

(e) All permittees of space stations in the Non-Voice Non-Geostationary Satellite Service (< 1 GHz) must notify the Commission as each milestone in paragraphs (a) - (d) of this section is met.

§ 25.407. Frequency Assignment Policies.

Each Non-Voice Non-Geostationary Satellite Service (< 1 GHz) licensee will be assigned frequencies in the 137-138 MHz, 148-150.05 MHz, [399.9-400.05 MHz,] and/or 400.15-401 MHz bands, subject to its ability to demonstrate compliance with all of the requirements of this subpart, including the demonstration that it will not cause harmful interference to any authorized or licensed Non-Voice Non-Geostationary Satellite Service (< 1 GHz) system, and the demonstration that it will operate compatibly with other authorized users in the assigned frequency bands by complying with the operating conditions specified for Non-Voice Non-Geostationary Satellite Service (< 1 GHz) systems in Section 25.408.

§ 25.408. Operating Conditions for Systems Operating in the Non-Voice Non-Geostationary Satellite Service (< 1 GHz).

In order to ensure compatible operations with authorized users in the frequency bands to be utilized for operations in the Non-Voice Non-Geostationary Satellite Service (< 1 GHz), Non-Voice Non-Geostationary Satellite Service (< 1 GHz) systems must operate in accordance with the conditions specified in this section.

(a) Service Limitation. Voice services may not be provided.

(b) Coordination Requirements.

(1) The frequency bands allocated for use by the Non-Voice Non-Geostationary Satellite Service (< 1 GHz) are also authorized for use by agencies of the United States Government. The governmental use of frequencies in the Non-Voice Non-Geostationary Satellite Service (< 1 GHz) frequency bands is under the regulatory jurisdiction of the National Telecommunications and Information Administration (NTIA).

(2) The Commission will use its existing procedures for liaison with NTIA to reach agreement with respect to the avoidance of mutually unacceptable interference between Non-Voice Non-Geostationary Satellite Service (< 1 GHz) systems and governmental users under the jurisdiction of NTIA through the frequency assignment and coordination practices established by NTIA and the Interdepartment Radio Advisory Committee (IRAC).

(3) For purposes of the preceding paragraph of this section, the Commission shall coordinate with NTIA with regard to the frequencies to be used by those earth stations of Non-Voice Non-Geostationary Satellite Service (< 1 GHz) systems that are not subject to blanket licensing under Section 25.409, and authorized governmental fixed stations in the Fixed and Mobile services, through the exchange of appropriate systems information. In addition, the Commission shall coordinate with NTIA on the spectrum use that will lead to the avoidance of unacceptable interference between Non-Voice Non-Geostationary Satellite Service (< 1 GHz) system downlink operations and authorized governmental users.

§ 25.409. User Transceivers.

Individual user transceivers need not be licensed. Service vendors may file blanket applications for transceiver units using FCC Form 493 and specifying the number of units to be covered by the blanket license. FCC Form 430 should be submitted if not already on file in conjunction with other facilities licensed under this subpart. Each applicant for a blanket license under this section shall demonstrate that transceiver operations will not cause harmful interference to other authorized users of the spectrum. This demonstration shall include a showing as to all the technical parameters, including duty cycle and power limits, under which the individual user transceivers will operate.

§ 25.410. Noncommercial Non-Voice Non-Geostationary Satellite Service (< 1 GHz) Systems.

The following provisions shall be applicable to noncommercial Non-Voice Non-Geostationary Satellite Service (< 1 GHz) satellite systems. If other provisions of this subpart conflict with this section, the provisions of this section shall apply.

(a) Eligibility. Noncommercial Space stations in the Non-Voice Non-Geostationary Satellite Service (< 1 GHz) shall be licensed only: (1) for the provision of international services; (2) on a non-common carrier basis; and (3) to non-profit entities organized under Section 501(c)(3) of the Internal Revenue Code.

(b) Scope of Service. Noncommercial space stations in the Non-Voice Non-Geostationary Satellite Service (< 1 GHz) shall be licensed only upon a showing that they will be used primarily to serve health, educational, scientific, disaster relief, or other humanitarian assistance needs of the intended user population. In no event shall a noncommercial space station in the Non-Voice Non-Geostationary Satellite Service (< 1 GHz) be used for the provision of services that are not directly related to the furtherance of the licensee's health, educational, scientific, disaster relief or humanitarian objectives.