

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

In the Matter of )  
 )  
 ORBITAL COMMUNICATIONS ) File Nos. 22-DSS-MP-90  
 CORPORATION ) 9-DSS-LA-94  
 ) 10-DSS-AMEND-94  
 Authority to Construct, Launch )  
 and Operate a Non-Voice, )  
 Non-Geostationary Mobile- )  
 Satellite Service System )

**MEMORANDUM OPINION AND ORDER ON RECONSIDERATION**

Adopted: March 30, 1995

Released: June 2, 1995

By the Commission:

**I. Introduction**

1. In October 1994, the Commission authorized Orbital Communications Corporation ("ORBCOMM") to construct, launch and operate a non-voice, non-geostationary ("NVNG") mobile-satellite system.<sup>1</sup> Final Analysis Communications Services, Inc. ("FACS") and Volunteers in Technical Assistance ("VITA") ask that we reconsider that decision.<sup>2</sup> For the reasons discussed below, we deny both Petitions for Reconsideration.

**II. Background**

2. ORBCOMM's system is the first NVNG mobile-satellite system to be licensed by the Commission. The other two applicants in the processing round are VITA and STARSYS Global

<sup>1</sup> Orbital Communications Corporation, 9 F.C.C. Rcd. 6476 (1994). (Licensing Order).

<sup>2</sup> Petition for Reconsideration filed by Final Analysis Communication Systems, Inc. on November 23, 1994; Petition for Reconsideration filed by Volunteers in Technical Assistance on November 28, 1994. ORBCOMM opposed these Petitions on December 5, 1994 and FACS and VITA separately replied on December 15, 1994 and December 20, 1994, respectively.

Positioning, Inc.<sup>3</sup> Before we issued ORBCOMM's license, these three applicants reached a "Joint Sharing Agreement" stating that VITA would be able to use the 149.81 - 149.9 MHz frequency band for its Earth-to-space, or uplink, operations.<sup>4</sup>

3. In its Licensing Order, the Commission authorized ORBCOMM to operate in the uplink direction throughout the 148.905 - 149.9 MHz frequency band.<sup>5</sup> This band includes the 90 kHz that the first-round applicants agreed would be available for use by VITA. However, ORBCOMM's system contains a mechanism designed to prevent interference to other users of the band, including VITA and Federal Government users. The mechanism, a "Dynamic Channel Activity Assignment System" (DCAAS), is designed to avoid assigning ORBCOMM's subscriber traffic to uplink channels that are occupied by other users. To accomplish this, the DCAAS will scan ORBCOMM's uplink band approximately every five seconds searching for actively used channels. The system will then assign subscriber traffic to specific frequencies for the next five-second period based on its assessment of the least used frequencies at the time of the previous scan. We found the DCAAS would permit ORBCOMM to operate throughout the 148.905 - 149.9 MHz band without interfering with existing users.

4. In its original application, VITA proposed to use both fixed and mobile earth stations to access its space stations. It proposed to use "fixed" earth stations, intended for permanent installation, in the United States, and mobile "field" stations, described as lap-top, PC-based terminals, throughout the world.<sup>6</sup> VITA amended its system application in April 1994, however, to imply it may use field earth stations in the United States.<sup>7</sup> This created a potential for increased interference into Government operations in the band.<sup>8</sup> On December 13, 1994, the Interdepartment Radio Advisory

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<sup>3</sup> We expect to take action on these applications shortly.

<sup>4</sup> Jointly Filed Supplemental Comments of ORBCOMM, VITA and STARSYS, August 7, 1992 (Joint Sharing Agreement).

<sup>5</sup> ORBCOMM is authorized to operate throughout the entire 148 MHz-149.9 MHz band until STARSYS is prepared to launch its proposed system. In its application, ORBCOMM asked to use 50 kHz of spectrum between 400.075 and 400.125 MHz to provide GPS-derived time signals. Because the Licensing Order did not clearly state ORBCOMM's authority to operate on this frequency, we clarify now its right to do so.

<sup>6</sup> Application of Volunteers in Technical Assistance, File No. CSS-91-007(3), September 21, 1991. On page 126 of its application, VITA describes its intended use of approximately 1000 Field Earth Stations located in Africa, Asia and Latin America. None are described as intended for use in the United States.

<sup>7</sup> Amendment to the Application of Volunteers in Technical Assistance, File No. 30-DSS-AMEND-94, April 25, 1994.

<sup>8</sup> All NVNG applicants must demonstrate they have coordinated their fixed and mobile terminals with the Federal Government, which is the primary user of frequencies on which NVNG systems are to operate. See 47 C.F.R. § 25.142(b)(2)(ii). Because they may transmit from any location, mobile NVNG terminals must meet stringent operating limits devised to protect all other domestic operators in the 148 -149.9 MHz band. See 47 C.F.R. § 2.106 (n. US323). Fixed stations, on the other hand, can be

Committee (IRAC)<sup>9</sup> notified the Commission that it had reached an accord with VITA that could allow VITA to use mobile earth terminals domestically, subject to certain specific operating limits.<sup>10</sup>

5. FACS and four other parties have filed applications in the second processing round of NVNG applications.<sup>11</sup> ORBCOMM also filed an application for license modification, requesting additional frequencies for its system. The comment cycle regarding second-round applications closed in April 1995.

### III. Discussion

#### A. VITA's Petition

6. In its Petition for Reconsideration, VITA states that ORBCOMM's system will harmfully interfere with VITA's field station uplink transmissions in the 149.81 -149.9 MHz band. Specifically, VITA argues that because its field stations will operate in a very short "burst" transmission mode, ORBCOMM's five-second band sweep will not adequately detect transmissions from these stations. If a VITA subscriber begins uplinking information immediately after the ORBCOMM satellite has detected no activity on the VITA frequency band, the ORBCOMM satellite could assign ORBCOMM traffic to VITA frequencies that would no longer be vacant. VITA alleges this could result in the "collision" of data packets between the two systems for up to five seconds. According to VITA, this will more harmfully impede its operations than those of ORBCOMM. To mitigate this potential interference, VITA asks us to condition ORBCOMM's license on successful frequency coordination with VITA.

7. ORBCOMM says that its DCAAS will operate with sufficient particularity to avoid undue collisions with VITA transmissions. It further states that the Commission, in licensing ORBCOMM to operate across VITA's frequencies, has already considered the impact of its operations on VITA's system proposal, and has found it to be unobjectionable. Finally, ORBCOMM notes that a license condition is unnecessary, because Section 25.142(b)(3) of our rules already requires NVNG licensees to coordinate their systems with each other.<sup>12</sup>

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individually coordinated according to their location. Consequently, fixed stations need not meet the mobile terminal operating limits.

<sup>9</sup> The IRAC, together with the National Telecommunications and Information Administration (NTIA), is responsible for frequency coordination efforts on behalf of Federal Government operations.

<sup>10</sup> Letter from Chairman, IRAC, to FCC Liaison Representative (Dec. 13, 1994). The IRAC has agreed that VITA's most recent system proposal will not harmfully interfere into government operations as long as six specific license conditions are placed on VITA's uplink operations.

<sup>11</sup> LEO ONE USA Corporation, GE American Communications, Inc., E-Sat, Inc., and CTA Commercial Systems, Inc. LEO ONE filed its application in July 1994. The remaining parties filed applications pursuant to a Commission-imposed filing deadline on November 16, 1994.

<sup>12</sup> ORBCOMM also says that the company has not been contacted by VITA regarding this matter, but agrees to discuss it with VITA upon request.

8. VITA replies that ORBCOMM's "paper" claims of protection are not convincing, that the Commission has not previously considered VITA's concerns, and that a separate license condition is necessary because ORBCOMM has not been responsive to VITA's requests for coordination.

9. As an initial matter, we clarify that the Commission did not address the concerns now raised by VITA when it granted ORBCOMM's license. While we did find that ORBCOMM's DCAAS system should adequately protect existing terrestrial services, we did not know the particulars of VITA's domestic earth-station operations because they were not finalized at that time.<sup>13</sup> Now that VITA has completed its system design,<sup>14</sup> and the IRAC has approved VITA's proposed use of field terminals, the Commission, ORBCOMM and others will have the opportunity to assess the interference potential both to and from VITA's field station operations.

10. At the time the parties reached the Joint Sharing Agreement, they agreed that ORBCOMM's DCAAS could adequately protect VITA's operations.<sup>15</sup> However, as discussed above, VITA's original proposal included only fixed earth-stations, as opposed to both fixed and field-earth stations, in the United States. The fixed earth-station transmissions, like those of existing terrestrial users, are likely to be of considerably longer duration than those of mobile NVNG users, and thus more readily identified by the DCAAS scan as unavailable for assignment to other traffic. Thus, our finding that ORBCOMM's DCAAS system would protect existing terrestrial users would have extended to VITA's initial fixed earth-station proposal. The addition of field earth-stations to its system design will complicate this sharing scenario. The shorter, field transmissions now proposed by VITA may be harder to detect and avoid. Accordingly, we agree with VITA that ORBCOMM's DCAAS may not avert all potential collisions among the data packet uplinks of the two systems. Because VITA's operations are confined to 90 kHz of spectrum, it has a limited number of available channels to which to reassign any blocked transmissions. ORBCOMM has a much greater range of available spectrum than does VITA, and is thus more likely to be able to reassign its colliding traffic to a clear channel. Any collisions that do occur are therefore likely to impact VITA's operations more severely than those of ORBCOMM. As the two systems become operational, the parties will likely need to coordinate their operations to permit an acceptable level of service for each.

11. We agree with ORBCOMM, however, that a specific license condition requiring coordination with VITA is unnecessary. Indeed, in our Report and Order establishing technical and service rules for the NVNG mobile-satellite service, we rejected a request that NVNG licenses bear a condition requiring the licensee to negotiate coordination agreements in good faith with subsequent licensees.<sup>16</sup> Both the Commission's rules and longstanding policy make it abundantly apparent that we

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<sup>13</sup> Specifically, it would have been premature to address concerns regarding VITA's proposed field station operations until it was apparent that they could be coordinated with IRAC for domestic use. It was not clear at the time ORBCOMM's license was issued that this coordination would be successful.

<sup>14</sup> Supplement to Application for Authority to Construct, April 25, 1994, In Response to Frequency Coordination Between VITA and NTIA, forwarded to the Commission by VITA on December 16, 1994.

<sup>15</sup> See Joint Sharing Agreement at p. 4.

<sup>16</sup> Report and Order in CC Docket 92-76, 8 F.C.C. Rcd. 8450, at ¶¶ 8-9 (1993).

expect our licensees in this service, as in any other, to coordinate in good faith to resolve conflicts.<sup>17</sup> There is no indication here that the parties have even commenced negotiations, much less reached an impasse. We are confident that the parties will be able to resolve any conflicts that may arise.<sup>18</sup> Should VITA and ORBCOMM reach an impasse in coordination efforts, however, the Commission will impose its own solution.

#### B. The FACS Petition

12. On November 16, 1994, pursuant to a cut-off deadline, FACS and other prospective new entrants filed NVNG applications. On that same date, ORBCOMM filed an application for license modification, requesting additional frequencies for its first-round system. FACS asks that we add a condition to ORBCOMM's license stating that ORBCOMM may not seek to expand its system until after second-round applications for new systems have been processed. FACS argues that allowing ORBCOMM to seek expansion spectrum will run counter to the Commission's expressed intent to promote new NVNG systems.

13. ORBCOMM replies that FACS's Petition is procedurally and substantively defective. ORBCOMM states it would be premature to prohibit it from seeking expansion capacity until we determine how much spectrum is needed to accommodate the new entrants and how much spectrum will be available.<sup>19</sup> ORBCOMM notes further that only one of the first-round applications has been granted. If either of the remaining two is not granted, it argues, additional spectrum will be available to the later filed applications. ORBCOMM also notes additional NVNG spectrum may be allocated at the upcoming World Radiocommunication Conference.<sup>20</sup> ORBCOMM finally alleges that the Commission may not summarily deny it access to NVNG spectrum without either a comparative hearing or some opportunity for general notice and comment.

14. In response, FACS alleges further that ORBCOMM's Application for License Modification is, in substance, a timely-filed Petition for Reconsideration of its license.<sup>21</sup> Thus, FACS

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<sup>17</sup> E.g., *id.* at ¶ 9; 47 C.F.R. § 25.142(b)(3) (NVNG licensees and applicants must "cooperate fully and make every reasonable effort to resolve technical problems and conflicts that may inhibit effective and efficient use of the radio spectrum").

<sup>18</sup> VITA has already suggested ways to address its concerns regarding data packet collisions in its uplink band. There are perhaps others. As a starting point, the parties should look to their Joint Sharing Agreement in determining their respective obligations. As we stated in the ORBCOMM Licensing Order, the parties and the Commission have all placed great weight on this Agreement.

<sup>19</sup> While the initial comment cycle regarding these applications recently ended, the Commission has not yet had time to fully analyze these comments.

<sup>20</sup> Agenda Item 3(d) for the International Telecommunication Union's 1995 World Radiocommunication Conference (WRC-95) establishes the possibility of the allocation of spectrum to this service in 1995.

<sup>21</sup> Paragraph 42 of the Licensing Order states that ORBCOMM may decline its authorization within thirty days of release of the Licensing Order. Failure to decline within that period constitutes formal acceptance of the authorization. This clause, which is routinely included in the licenses of our

argues, the Commission must vacate ORBCOMM's license<sup>22</sup> and treat the original application and the modification request together as a newly filed, second-round application. ORBCOMM replies that it neither explicitly nor implicitly declined its system license.<sup>23</sup> ORBCOMM states that the modification application filed on November 16 represents proposed system enhancements, not a counter-proposal to build a different system. Grant of this modification request is not critical, ORBCOMM states, to the company's commencement of service. Finally, ORBCOMM notes that the timing of its filing was driven solely by the Commission's initiation of a second NVNG processing round, not by the thirty-day time period in which it could reject its authorization.

15. We find FACS's claim that ORBCOMM has declined its license untenable. ORBCOMM says that it did not decline its license. If it had wanted to, it could have done so clearly. It did not. Section 25.156 of our rules, 47 C.F.R. § 25.156, describes the manner in which a license must be declined. A licensee wishing to decline a conditional license must file a petition for reconsideration within thirty days of the release date of the grant. That petition must reject the grant as made and explain the reasons why the application should be granted as originally requested. ORBCOMM's November 16 pleading meets only one of these criteria -- the thirty day time limit. This application does not reject the license, nor does it request that the Commission reconsider any action that it has taken. Indeed, ORBCOMM's modification application does not take issue with any condition placed on its license. Rather, ORBCOMM's license modification request seeks the use of new frequencies and additional satellites to expand its authorized system. It looks precisely like the pleading it is styled to be -- an application for license modification. The fact that the cut-off deadline for consideration of new frequencies fell within the thirty days after the grant of ORBCOMM's license has no bearing on whether the company has accepted its original authorization. Absent a clear statement in its modification application or elsewhere, that ORBCOMM has affirmatively declined the authorization, we will not vacate its license.

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domestic space station licensees, is the embodiment of Section 25.156 of our rules, 47 C.F.R. § 25.156.

<sup>22</sup> Section 1.110 of our rules states that upon receipt of a written request rejecting a conditional grant, the Commission will vacate its original action on the application, and set the application for hearing. 47 C.F.R. § 1.110.

<sup>23</sup> Because this issue was raised for the first time in FACS's Reply comments, we will grant ORBCOMM's request that we accept for consideration its opposition to this allegation, entitled "Supplemental Response to the Reply of Final Analysis," dated January 3, 1995. On January 18, 1995, FACS filed a Reply to ORBCOMM's Supplemental Response. This Reply was not limited in scope to matters raised in ORBCOMM's prior pleading. See 47 C.F.R. § 1.45(b). However, we will accept for consideration only that portion of FACS's Reply that responds to ORBCOMM's Supplemental Response.

16. FACS nonetheless urges us to look to the "substance" of ORBCOMM's action and conclude that ORBCOMM unintentionally declined its license.<sup>24</sup> The facts do not support this conclusion either. In support of this argument, FACS attempts to draw an analogy between a situation in which the Commission protected its procedural rules from abuse by refusing to allow a party to circumvent statutory time limits merely by renaming its pleading (Application of RCA Global Communications, Inc., 68 F.C.C. 2d 1197 (1978)) and the situation at hand, where the Commission is asked to infer that a licensee has inadvertently, but in accord with Commission rules, acted to its own detriment. The rationale for looking to the substance of the transaction at issue is readily apparent in the former case. Parties are obligated to meet our rules, and may not circumvent them by mere semantics. Here, the Commission is asked to find that a party has unintentionally, and to its own detriment, met our rules. Unlike the situation in RCA Global Communications, the Commission in this situation has no interest to protect by such a draconian action.

17. We also agree with ORBCOMM it is too early to determine whether ORBCOMM should be permitted to seek system expansion. If all the pending NVNG applications, including those requesting expansion capacity, can be granted, the relief sought by FACS will be unnecessary. If the pending applications are mutually exclusive, the Commission will have to determine the proper method for selecting among the competing qualified applicants. In the course of that proceeding, which will involve the opportunity for notice and comment by interested parties, it would be appropriate to consider legitimate matters of policy such as those raised by FACS. Because FACS will have ample opportunity to advance its arguments regarding access to NVNG spectrum,<sup>25</sup> we deny FACS's Petition.

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<sup>24</sup> Alternatively, FACS appears to suggest that ORBCOMM's modification request is, in substance, a major amendment that will require the Commission to treat ORBCOMM's first round little LEO application as a newly filed application that must be considered in the second processing round. See 47 C.F.R. § 25.116(c). However, this cannot be the case. ORBCOMM did not have a pending application at the time it filed its modification request. Rather, it became a Commission licensee on October 27, 1994 - - the date its Licensing Order was released. See 47 C.F.R. § 1.103(a). Because ORBCOMM was no longer a space station applicant on November 16, it could not have filed an amendment. See 47 C.F.R. § 25.116(a).

<sup>25</sup> Because we find that consideration of FACS's Petition is premature, we will not address in detail here ORBCOMM's allegations that the summary denial of its modification request without either comparative hearing or notice and comment rulemaking would be unlawful. However, consideration of this issue in a subsequent proceeding that will allow for full comment by affected parties should obviate ORBCOMM's concern.

#### IV. Ordering Clause

18. Accordingly, IT IS ORDERED that the Petitions for Reconsideration filed by Volunteers in Technical Assistance and by Final Analysis Communications Services, Inc. ARE DENIED.

FEDERAL COMMUNICATIONS COMMISSION

William F. Caton  
Acting Secretary