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

In the Matter of Application of	)	File Nos. 26/27/28-DSS-P-94
	)	36-SAT-AMEND-95
Celsat America, Inc.	)	65/66/67-SAT-AMEND-96
	)	192-SAT-AMEND-97
Concerning Use of the	)	88-SAT-AMEND-98
1990-2025/2165-2200 MHz and	)	
Associated Frequency Bands	)	IBFS Nos. SAT-A/O-19940408-00016/17/18
for a Mobile-Satellite System	)	SAT-AMD-19941125-00089
	)	SAT-AMD-19960124-00007/8/9
	)	SAT-AMD-19970925-00124
	)	SAT-AMD-19980113-00009
	)	SAT-AMD-20001103-00153

ORDER AND AUTHORIZATION

Adopted: July 17, 2001 **Released:** July 17, 2001

By the Chief, International Bureau:

I. INTRODUCTION

1. By this *Order*, we grant the request of Celsat America, Inc. (Celsat) (formerly Celsat, Inc.) for the use of spectrum in the 2 GHz band for provision of Mobile-Satellite Service (MSS).[1] This action is a significant step in assigning this spectrum for use by MSS providers, and facilitates implementation of Celsat's proposed system's technology and service offerings in the marketplace.

II. BACKGROUND

2. Celsat proposes to construct and launch a mobile-satellite system to serve the United States operating in the geostationary-satellite orbit (GSO), using service links[2] in the 2 GHz MSS band

[1] The term "2 GHz MSS Band" is used in this *Order* to refer to the 1990-2025 MHz (uplink) and 2165-2200 MHz (downlink) frequencies. These frequencies are allocated to the Mobile-Satellite Service (MSS) in the United States. *See Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for Use by the Mobile-Satellite Service*, ET Docket No. 95-18, First Report and Order and Further Notice of Proposed Rule Making, 12 FCC Rcd 7388 (1997), *aff'd on recon*., Memorandum Opinion and Order and Third Notice of Proposed Rule Making and Order, 13 FCC Rcd 23949 (1998), *further proceedings*, Second Report And Order and Second Memorandum Opinion and Order, 15 FCC Rcd 12315 (2000) (*2 GHz Allocation & Relocation Proceeding*).

[2] "Service links" are the radio links that transmit a user's messages in both directions between a user's earth terminal and the system's satellite(s).

and feeder links[3] in the Ka-band.[4] Specifically, Celsat requests to operate its 2 GHz MSS service links at either (i) the orbital slot located at 95° W.L. with 850 megahertz each of uplink and downlink feeder link spectrum in the Ka-band (the "one-satellite scenario"); or, in the alternative, (ii) the orbital slots located at 83° W.L. and at 121° W.L. with 500 megahertz each of uplink and downlink feeder link spectrum in the Ka-band (the "two-satellite scenario").[5]

3. Initially, Celsat submitted its 2 GHz MSS application on April 8, 1994, proposing a system of three GSO satellites that would operate service links in the 2 GHz MSS bands and feeder links in the 10.7-10.95 GHz and 12.75-13.00 GHz bands.[6] After the Commission allocated the 2 GHz bands to MSS in the United States,[7] we issued a Public Notice establishing a cut-off date for additional applications to provide 2 GHz MSS.[8] Celsat amended its application twice before we sought comment on the 2 GHz MSS filings, reducing the number of space stations to one GSO satellite, and proposing to use Ka-band spectrum allocated to the GSO fixed-satellite service (FSS) for feeder link operations.[9] On March 19, 1998, we sought comment on Celsat's application, as amended, along with other 2 GHz MSS applications.[10] The Commission subsequently adopted service rules for 2 GHz MSS systems.[11] Celsat amended its application once more to address the requirements adopted in the *2 GHz MSS Order*.[12]

---

[3] "Feeder links" are the radio links that transmit a user's messages in both directions between the system's satellite(s) and its gateway earth station(s), connecting the MSS network with the public switched telephone network.

[4] The "Ka-band" refers to the Earth-to-space (uplink) frequencies at 27.5-30.0 GHz and the corresponding space-to-Earth (downlink) frequencies at 17.7-20.2 GHz.

[5] Amendment to Application of Celsat America, Inc., File No. SAT-AMD-20001103-00153, at 2-3 (Conforming Amendment).

[6] Application of Celsat, Inc., File No. 26/27/28-DSS-P-94, IBFS No. SAT-A/O-19940408-00016/17/18 (Celsat Application), *amended*, File No. 36-SAT-AMEND-95, IBFS No. SAT-AMD-19941125-00089 (reporting transfer of control of Celsat, Inc. to Celsat America, Inc.), *further amended*, File No. 65/66/67-SAT-AMEND-96, IBFS No. SAT-AMD-19960124-00007/8/9 (reporting *pro forma* ownership changes).

[7] *See 2 GHz Allocation & Relocation Proceeding*, First Report and Order and Further Notice of Proposed Rule Making, 12 FCC Rcd 7388.

[8] Public Notice, Report No. SPB-88, 12 FCC Rcd 10446 (1997) (establishing cut-off date of August 21, 1997); Public Notice, Report No. SPB-95, 12 FCC Rcd 12050 (1997) (extending cut-off date to September 5, 1997); Public Notice, Report No. SPB-99 (rel. September 4, 1997) (extending cut-off date to September 26, 1997). In this document, the term "applicant" and "application" refers to all parties, and their submissions, seeking to operate 2 GHz MSS systems, whether they are applicants for U.S.-licensed systems or letter of intent filers from non-U.S. licensed systems seeking to serve the U.S. market using 2 GHz MSS spectrum.

[9] Amendment to Application of Celsat America, Inc., File No. 192-SAT-AMEND-97, IBFS No. SAT-AMD-19970925-00124; Amendment to Application of Celsat America, Inc., File No. 88-SAT-AMEND-98; IBFS No. SAT-AMD-19980113-00009.

[10] *See* Public Notice, Report No. SPB-119 (rel., March 19, 1998). In response to this Public Notice, 15 comments, 3 reply comments, and 7 responses were filed specifically addressing Celsat's application. A list of pleadings is attached in Appendix A.

[11] *The Establishment of Policies and Service Rules for the Mobile Satellite Service in the 2 GHz Band*, IB Docket No. 99-81, Report and Order, 15 FCC Rcd 16127 (2000) (*2 GHz MSS Order*).

[12] Conforming Amendment, footnote 5, *supra*. *See* Public Notice, Report No. SAT-00061 (rel. November 29, 2000) (*2 GHz MSS Amendment PN*). PanAmSat Corporation filed a Petition to Deny Celsat's Conforming Amendment, to which Celsat replied. These pleadings are listed in Appendix A.

4. In connection with its application, Celsat also has asked us to waive the following rules and policies:[13] (i) financial qualifications; (ii) two orbital location limit; (iii) and footnote NG104 to the Table of Frequency Allocations.[14]

III. DISCUSSION

5. Under rules adopted in the Commission's *2 GHz MSS Order*, Celsat must demonstrate that its system meets certain technical requirements. We address these requirements first. We then turn to Celsat's requests for service links in the 2 GHz MSS band and feeder links in the Ka-band frequencies, followed by a review of Celsat's licensing conditions, implementation milestones, and orbital debris mitigation strategy. Finally, we dispose of various parties' arguments against granting Celsat's application and Celsat's pending waiver requests.

A. Threshold Technical Requirements

1. Frequency Agility

6. Under the Commission's service rules and policies, 2 GHz MSS systems must be capable of operating across at least seventy percent of the United States' 2 GHz MSS allocation in the 1990-2025 MHz and 2165-2200 MHz bands.[15] The Commission also requires that 2 GHz MSS systems be capable of operating without fixed frequency translations between the uplink and downlink frequencies.[16] Celsat's proposed 2 GHz MSS system meets these requirements.[17]

2. GSO Coverage Requirements

7. Under the Commission's rules, GSO 2 GHz MSS systems must be capable of providing continuous coverage throughout all 50 states, Puerto Rico and U.S. Virgin Islands, if technically feasible.[18] Celsat's proposed system meets these requirements under either the one-satellite or two-satellite scenarios.

B. Service-Link Spectrum

8. The *2 GHz MSS Order* adopted a hybrid band arrangement that divided the 2 GHz MSS uplink (1990-2025 MHz) and downlink (2165-2200 MHz) bands into segments of equal bandwidth based on the number of systems seeking assignments.[19] The Commission determined that providing 3.5 megahertz in each direction for the nine then-pending system proponents would be sufficient to

---

[13] Celsat Petition for Waiver (filed April 4, 1994).

[14] A Request for Waiver of application fees, filed September 25, 1997 pursuant to Section 1.1117 of the Commission's Rules, 47 C.F.R. § 1.1117, will be addressed separately by the Commission's Office of Managing Director. The Managing Director is responsible for decisions associated with the fee collection process.

[15] *2 GHz MSS Order*, 15 FCC Rcd at 16152 ¶ 52.

[16] *Id.* at ¶ 53.

[17] Conforming Amendment at 2.

[18] 47 C.F.R. § 25.143(b)(2)(iv).

[19] *2 GHz MSS Order*, 15 FCC Rcd at 16138 ¶ 16.

commence operations.[20] The Commission provided that, in the event not all system proponents proceed toward authorization, the remaining system proponents would receive more than 3.5 megahertz of spectrum in each direction upon authorization.[21] In addition, the Commission reserved one additional spectrum segment in each direction for expansion of system(s) by operator(s) meeting certain criteria for service to unserved areas.[22] The following formula expresses the amount of spectrum available for each system in each direction of transmission:

35 megahertz ÷ (Number of System Proponents + One) = Size of Each Spectrum Segment[23]

There are currently eight 2 GHz MSS system proponents participating in this processing round.[24] We will not at this time, however, implement that portion of the Commission's *2 GHz MSS Order* that would give each system proponent access to more than 3.5 megahertz of spectrum in each direction on a primary basis. Subsequent to release of the *2 GHz MSS Order*, the Commission has received new proposals for use of the 2 GHz MSS bands.[25] Delaying the designation of additional spectrum will give the Commission the opportunity to consider these proposals. Therefore, in this *Order*, Celsat will receive access to a spectrum segment of 3.5 megahertz, in each direction of transmission, on a primary basis, *i.e.*, a "Selected Assignment."[26] Celsat will choose its Selected Assignment such that the band edge of the assignment is an integer multiple of 3.88 megahertz from the band edge of the 2 GHz MSS band, which will allow the Commission to address the proposals before it.

9. Celsat must identify the specific frequencies of its Selected Assignment when the first satellite in its system reaches its intended orbit, and notify the Commission in writing of its selection.[27] Consistent with the *2 GHz MSS Order*, Celsat may also elect to operate outside its Selected Assignment on a secondary basis with respect to other 2 GHz MSS operators, subject to certain conditions.[28]

---

[20] *Id.* at 16139 ¶ 17.

[21] *Id.*

[22] *Id.* at 16146-47 ¶¶ 35-39.

[23] *Id.* at 16138 ¶ 16.

[24] *See 2 GHz MSS Amendment PN*, Report No. SAT-00061.

[25] *See Ex parte* Letter of New ICO Global Communications (Holdings) Ltd., IB Docket No. 99-81 (dated March 8, 2001) (ICO *Ex Parte* Letter); Petition for Rulemaking of the Cellular Telecommunications & Internet Association (filed May 18, 2001) (CTIA Petition).

[26] Systems must be implemented consistent with the plans for incumbent relocation adopted in the *2 GHz Allocation & Relocation Proceeding*, Second Report And Order and Second Memorandum Opinion and Order, 15 FCC Rcd 12315, including the phased plan for relocation in the 1990-2025 MHz band.

[27] *2 GHz MSS Order*, 15 FCC Rcd at 16138 ¶ 16. A satellite's intended orbit is the final orbit it will occupy to provide commercial service. *Id.* n.75.

[28] *Id.* at 16139-40 ¶ 19. The 1990-2025 MHz (Earth-to-space) and 2165-2200 MHz (space-to-Earth) bands are immediately adjacent to the 2025-2110 MHz (Earth-to-space, space-to-space) and 2200-2290 MHz (space-to-Earth, space-to-space) bands, respectively, where the Federal Government has extensive satellite network operations. To avoid the possibility of adjacent band interference, this potential interference situation needs to be considered by both non-Government and Government satellite operators when implementing their respective satellite systems near the band edges.

C. Feeder Links

10. Celsat proposes feeder link operations for one satellite in 850 megahertz of spectrum in the 27.5-31.0 GHz band and 850 megahertz of spectrum in the 17.7-20.2 GHz band.[29] In the alternative, Celsat proposes feeder link operations for two satellites in 500 megahertz of spectrum in the 27.5-31.0 GHz band and 500 megahertz of spectrum in the 17.7-20.2 GHz band.[30] As stated in the *2 GHz MSS Order*, the orbital location of Celsat's satellite(s), and resulting authorization of frequencies for feeder links, are being resolved in the context of the pending Ka-band second processing round, and therefore, we will not discuss further Celsat's feeder link request in this *Order*.[31] Consequently, the final decision as to whether Celsat will need to deploy its 2 GHz MSS system under either the one-satellite scenario or the two-satellite scenario will be addressed as a result of the disposition of the Ka-band orbit assignment plan.

D. Pre-operational Authority

11. Under Commission rules, the fifteen-year license term for a 2 GHz MSS system begins upon a certification by the system operator that the first satellite in its system has begun operations consistent with the terms and conditions specified in its authorization.[32] The Commission indicated in the *2 GHz MSS Order* that it would "authorize system operators to conduct pre-operational testing in the license grant, to the extent that applicants include such information in their applications."[33] Celsat did not request such authority. Accordingly, this authorization does not include authority for operations except at the orbit location(s) and on the frequencies specified in the application, as amended. Authority for any other radio transmissions in any frequency or orbit location will need to be obtained by filing a request for a license modification or special temporary authorization, as appropriate.

E. Regulatory Classification

12. Celsat states that it will operate its 2 GHz MSS satellite operations on a non-common carrier basis.[34] Under the Communications Act, Commission Rules, and consistent with our *2 GHz MSS Order*, we treat Celsat's space station operations as non-common carrier.[35] We will address the regulatory classification of earth stations operating as part of Celsat's system in connection with earth station licensing.[36]

---

[29] Conforming Amendment at 2-3.

[30] *Id.* at 3.

[31] *See 2 GHz MSS Order*, 15 FCC Rcd at 16168 ¶ 84. *See also* Public Notice, Report No. SAT-00012, at 2 (rel. March 16, 1999) (accepting Celsat's feeder link request as part of the second Ka-band processing round).

[32] *2 GHz MSS Order*, 15 FCC Rcd at 16175-76 ¶ 103; 47 C.F.R. § 25.121(a) ("Licenses for facilities governed by this part will be issued for a period of 10 years, except that licenses and authorizations in the 2 GHz Mobile-Satellite Service will be issued for a period of 15 years.").

[33] *2 GHz MSS Order*, 15 FCC Rcd at 16176 ¶ 103.

[34] Celsat Application at 50.

[35] 47 U.S.C. §§ 153(44), 332(c)(5); 47 C.F.R. § 20.9(a)(10); *2 GHz MSS Order*, 15 FCC Rcd at 16173 ¶ 95.

[36] We also note that the Commission will address issues concerning protection for aeronautical radionavigation in the 1559-1610 MHz band from the out-of-band emissions of 2 GHz MSS mobile earth terminals (METs) in the pending Global Mobile Personal Communications by Satellite (GMPCS) rulemaking, and the 2 GHz

F. Implementation Milestones

13. The *2 GHz MSS Order* adopted milestones for implementation that apply to 2 GHz MSS systems.[37] Consistent with the *2 GHz MSS Order*, therefore, Celsat must observe the following milestone requirements:

Milestone	Deadline[38]
Enter Non-contingent Satellite Manufacturing Contract	12 months after authorization
Complete Critical Design Review (CDR)	24 months after authorization
Begin Physical Construction of All Satellites	36 months after authorization
Complete Construction of One Satellite and Launch It Into Its Assigned Orbital Location	60 months after authorization
Certify Entire System Operational	72 months after authorization

14. Celsat must describe the status of system construction and operation in its annual reports, and file a certification with the Commission within ten days following each of the milestones specified above.[39]

G. Orbital Debris Mitigation

15. Currently, the FCC addresses issues regarding orbital debris and satellite systems on a case-by-case basis, under the general "public interest, convenience and necessity" standard in the Communications Act.[40] To facilitate our orbital debris analysis, under Section 25.143(b)(1) of our rules, 2 GHz MSS system proponents are required to "describe the design and operational strategies that they will use, if any, to mitigate orbital debris."[41] This rule also requires 2 GHz MSS system proponents to "submit a casualty risk assessment if planned post-mission disposal involves atmospheric re-entry of the spacecraft."[42]

MSS METs will be subject to applicable rules and policies the Commission will adopt in that proceeding. *2 GHz MSS Order*, 15 FCC Rcd at 16196-97 ¶ 163 (citing *Amendment of Parts 2 and 25 to Implement the Global Mobile Personal Communications by Satellite (GMPCS) Memorandum of Understanding and Arrangements*, IB Docket No. 99-67, Notice of Proposed Rule Making, 14 FCC Rcd 5871 (1999)).

[37] *2 GHz MSS Order*, 15 FCC Rcd at 16177-78 ¶ 106.

[38] To the extent that the milestone schedule for Ka-band licenses may differ from the schedule imposed by this *Order*, we will address those differences in connection with any authorization of Ka-band spectrum.

[39] *See* 47 C.F.R. § 25.143(e)(1) (requiring satellite space-station operators to file annual reports with the Commission every October 15); *Id.* § 25.143(e)(3) (requiring satellite space-station operators to file a certification with the Commission within 10 days of a system implementation milestone).

[40] 47 U.S.C. § 303.

[41] 47 C.F.R. § 25.143(b)(1), as amended by the *2 GHz MSS Order*, 15 FCC Rcd at 16205. The Commission also stated that it intends to commence a rulemaking proceeding proposing to explore orbital debris mitigation issues. *2 GHz MSS Order*, 15 FCC Rcd at 16188 ¶ 138.

[42] 47 C.F.R. § 25.143(b)(1), as amended by the *2 GHz MSS Order*, 15 FCC Rcd at 16205.

16. In adopting this requirement, the Commission indicated that applicants may wish to consult the National Aeronautics & Space Administration (NASA)/Department of Defense (DoD) Guidelines on Debris Mitigation, as well as the International Telecommunication Union (ITU) Recommendation on disposal of geostationary satellites.[43] The NASA/DoD Guidelines identify four main objectives: 1) controlling debris released during normal operations; 2) minimizing debris generated by accidental explosions; 3) selecting safe flight profiles and operational configurations; and 4) providing for post-mission disposal of space structures.

17. Under the NASA/DoD Guidelines, these objectives are accomplished by a number of means.[44] The first objective – controlling debris released during normal operations – is addressed by minimizing the amount of debris released in a planned manner during normal operations. The second objective – minimizing debris generated by accidental explosions – is addressed by limiting the risk to other space systems from accidental explosions both during mission operations and after completion of mission operations. For mission operations, this is accomplished through analysis of credible failure modes and development of methods to limit the probability they will occur. Post-mission, this is accomplished through depletion of all sources of stored energy on board the spacecraft when they are no longer required for mission operations or post-mission disposal. The third objective – selecting a safe flight profile and operational configuration – is addressed through estimating and limiting the probability of collision with large objects during orbital lifetime, and the probability of disabling collisions with small debris during mission operations.

18. The fourth objective in the NASA/DoD Guidelines – providing for post-mission disposal of space structures – is met by planning for disposal of a spacecraft at the end of mission life to minimize impact on future space operations. This is accomplished through one of two options relevant here. The first option is atmospheric reentry, *i.e.*, leaving the structure in an orbit in which it will remain in orbit for no longer than 25 years after mission completion. Under this option, it is also necessary to address the casualty risk from any portions of the spacecraft that may survive atmospheric reentry. The second option is maneuvering to a storage orbit. There are three suggested storage orbits. The first is between low and middle Earth orbit, *i.e.*, satellite perigee altitude above 2,000 kilometers and apogee altitude below 19,700 kilometers. The second is between middle and geosynchronous Earth orbit, *i.e.*, perigee altitude above 20,700 kilometers and apogee altitude below 35,300 kilometers. The third is above geosynchronous Earth orbit, *i.e.*, perigee altitude above 36,100 kilometers (or approximately 300 kilometers above geosynchronous altitude). In addition to the NASA/DoD guidelines, and as the Commission observed in the *2 GHz MSS Order*,[45] the ITU has developed a recommendation concerning operations in the GSO.[46]

---

[43] *See 2 GHz MSS Order*, 15 FCC Rcd at 16118 ¶ 138.

[44] *See The Establishment of Policies and Service Rules for the Mobile Satellite Service in the 2 GHz Band*, IB Docket No. 99-81, 14 FCC Rcd 4843, 4901-03 (1999) (Appendix C).

[45] *2 GHz MSS Order*, 15 FCC Rcd at 16118 ¶ 138.

[46] Recommendation ITU-R S.1003. The recommendation suggests, in pertinent part, that a geostationary satellite at the end of its life should be transferred before complete exhaustion of its propellant, to a "supersynchronous graveyard orbit that does not intersect the GSO," with GSO defined as the mean earth radius of 42,164 kilometers plus or minus 300 kilometers. The recommendation also notes that what constitutes "an effective graveyard orbit" requires further studies. In this regard, we note that orbital perturbations due to solar and lunar gravitation, solar pressure, or other sources, may, over time, result in an inactive satellite's orbit intersecting the GSO, as defined by the ITU recommendation, even if the initial disposal altitude does not intersect the GSO.

19. Each of the 2 GHz MSS systems submitted a narrative statement concerning orbital debris mitigation. We note that, to the extent that the statements address debris mitigation issues involving launch vehicle operations, we have neither reviewed nor concluded the plans disclosed are appropriate.[47] We also note that, to the extent debris mitigation plans for MSS systems change, the system proponents should evaluate those changes to determine whether disclosure and/or prior approval is required.[48]

20. In its Conforming Amendment, Celsat addressed orbital debris mitigation issues pertinent to operations, including debris release and accidental explosions.[49] Specifically, Celsat indicates that it will minimize the probability of accidental explosions via "safe margins on pressure vessels such as battery shells and propellant tanks to preclude the possibility of rupture during the launch and on-orbit life of the satellite."[50] However, Celsat did not address limiting the probability of collision with large, known objects during satellite orbital lifetime. We expect Celsat and other 2 GHz MSS systems to develop appropriate operational plans and procedures to minimize the possibility of collision with large, known objects.[51]

21. Celsat also addressed end-of-mission orbital debris mitigation issues including defining a system disposal strategy and depletion of stored energy sources. However, in order to permit assessment of Celsat's disposal plan and provide adequate information for potentially effected parties, we require Celsat to supplement its narrative statement by providing greater specificity regarding the storage orbit parameters selected for post-mission satellite disposal. This information should be submitted no later than six months prior to the CDR milestone. We also note that this *Order* does not authorize the relocation of operational satellites to storage orbits at end-of-life. Such authorization will need to be obtained through a request for modification of Celsat's license.

H. Other Issues

22. *Timing of Licensing*. AT&T Wireless Services, Inc., Cingular Wireless LLC, Sprint PCS, and Verizon Wireless (Wireless Carriers) in a recent joint letter requested the Commission to defer grant of the pending 2 GHz MSS applications until (1) public comment is sought and received on the implications of New ICO Global Communications (Holdings) Ltd.'s (ICO's) March 8, 2001 *ex parte* letter proposing amendment of the 2 GHz MSS service rules to permit licensees to incorporate an "ancillary terrestrial component" into their 2 GHz MSS networks; and (2) the Commission considers a petition for rule making submitted by the Cellular Telecommunications & Internet Association (CTIA) requesting that the 2 GHz MSS bands be reallocated for other uses, such as terrestrial wireless services.[52]

---

[47] The United States licensing authority for commercial launches is the Federal Aviation Administration. *See* 14 C.F.R. § 400 *et seq*.

[48] *See* 47 C.F.R. §§ 1.65, 25.117(a). *See also 2 GHz MSS Order*, 15 FCC Rcd at 16179 ¶ 108 (system modifications requiring prior FCC approval should be identified well in advance of the CDR milestone).

[49] Conforming Amendment at 6-7.

[50] *Id.* at 7.

[51] *See, e.g.*, Amendment to Pending Application of Iridium LLC, SAT-AMD-20001103-00156 (November 3, 2000) at Exhibit 1, p.2.

[52] Letter to Michael K. Powell, Chairman, Federal Communications Commission from Douglas Brandon, AT&T Wireless Services, Inc., Brian F. Fontes, Cingular Wireless, LLC, Luisa L. Lancetti, Sprint Corporation, and John T. Scott, III, Verizon Wireless, IB Docket No. 99-81 (dated June 13, 2001) (citing the ICO *Ex Parte* Letter and CTIA Petition). *Accord Ex parte* Letter of CTIA, IB Docket No. 99-81 (dated July 12, 2001). *But see Ex parte*

For the reasons set forth in the ICO *Order* issued contemporaneously with this *Order and Authorization*, we deny the Wireless Carriers' request to defer action on the 2 GHz MSS applications.[53]

23. *Petitions to Deny*. The Boeing Company (Boeing) and Mobile Communications Holdings, Inc. (MCHI) filed Petitions to Deny Celsat's application, on the ground that Celsat seeks to use large blocks of globally allocated MSS spectrum exclusively for regional-only operations.[54] The Commission's *2 GHz MSS Order* addressed this concern, stating that all 2 GHz MSS applicants will be permitted to operate anywhere in the 2 GHz MSS bands, as the most equitable mechanism for assigning the available spectrum in light of the incumbent relocation process.[55] We therefore deny Boeing's and MCHI's Petitions to Deny Celsat's application.

24. *Celsat's Petition for Waiver*. When Celsat filed its initial application in April 1994, proposing a three-satellite system operating with feeder links in the 10.7-10.95 and 12.75-13.00 GHz bands, it submitted a Petition for Waiver seeking waiver of (i) any relevant financial qualification rules; (ii) the domestic FSS policy limiting providers to only two orbit locations capable of 50 state coverage;[56] and (iii) footnote NG104 to the Table of Frequency Allocations, limiting FSS use of the 10.7-11.7 GHz and 12.75-13.25 GHz bands to international systems.[57] Commission actions in the *2 GHz MSS Order* and Celsat's subsequent amendments to its original application have overtaken the need for these requests, as follows: (i) the Commission did not impose financial qualification for the current 2 GHz MSS processing round;[58] (ii) under either of Celsat's current scenarios, it is seeking authority to launch a maximum of two satellites; and (iii) Celsat has changed its proposed feeder link frequencies from the 10.7-10.95 and 12.75-13.00 GHz bands to the Ka-band. Therefore, we dismiss Celsat's Petition for Waiver as moot.

IV. ORDERING CLAUSES

25. Accordingly, IT IS ORDERED that the Application File Nos. 26/27/28-DSS-P-94, 36-SAT-AMEND-95, 65/66/67-SAT-AMEND-96, and 192-SAT-AMEND-97; IBFS Nos. SAT-A/O-19940408-00016/17/18, SAT-AMD-19941125-00089, SAT-AMD-19960124-00007/8/9, SAT-AMD-19970925-00124, and SAT-AMD-20001103-00153 IS GRANTED to the extent indicated herein and Celsat America, Inc. IS AUTHORIZED to construct, launch and operate its proposed mobile-satellite system to provide service in the United States in the 1990-2025 MHz and 2165-2200 MHz frequency bands, in accordance with the technical specifications set forth in its application, as amended, and the conditions set forth in the preceding paragraphs and consistent with our rules, unless specifically waived herein, and subject to the following conditions:

Letter of Globalstar, L.P., IB Docket No. 99-81 (dated July 2, 2001) (objecting to the Wireless Carriers' request); *Ex parte* Letter of Celsat America, Inc., IB Docket No. 99-81 (dated June 25, 2001) (same).

[53] *See ICO Services Limited, Letter of Intent to Provide Mobile-Satellite Service in the 2 GHz Bands*, Order, DA 01-1635, at ¶¶ 29-31 (Int'l Bur./OET, rel. July 17, 2001).

[54] Petition to Deny or Hold in Abeyance of The Boeing Company at 3-4; Petitions to Deny and Comments of Mobile Communications Holdings, Inc. at 16-17. *See also* Comments of Constellation Communications, Inc. at 21; Consolidated Comments and Petition to Deny of Iridium LLC at 9-10; Consolidated Reply of Iridium LLC at 9-10.

[55] *2 GHz MSS Order*, 15 FCC Rcd at 16137-38 ¶ 15.

[56] *See Licensing Space Stations in the Domestic Fixed-Satellite Service*, 50 Fed. Reg. 36071 (Sept. 5, 1985).

[57] 47 C.F.R. § 2.106, NG104.

[58] *2 GHz MSS Order*, 15 FCC Rcd at 16150 ¶ 48.

a. Celsat America, Inc. must choose a Selected Assignment in the 1990-2025 MHz and 2165-2200 MHz frequency bands upon launch of one satellite into its authorized satellite orbit location, and commencement of operations by that satellite.

b. The Selected Assignment shall give Celsat America, Inc. access to 3.5 megahertz in each direction of transmission on a primary basis;

c. The Selected Assignment shall be chosen such that the band edge of the assignment is an integer multiple of 3.88 megahertz from the band edge of the 2 GHz MSS band; and

d. Operations in frequencies in these bands outside the Selected Assignment shall be on a secondary basis to operations of other 2 GHz MSS systems.

26. IT IS FURTHER ORDERED that action on the orbital location(s) and feeder link requests contained in Application File Nos. 192-SAT-AMEND-97 and 88-SAT-AMEND-98; IBFS Nos. SAT-AMD-19970925-00124, SAT-AMD-19980113-00009, and SAT-AMD-20001103-00153 is DEFERRED as indicated herein.

27. IT IS FURTHER ORDERED that this authorization shall become NULL and VOID with no further action required on the Commission's part in the event the space station is not constructed, launched and placed into operation in accordance with the technical parameters and terms and conditions of the authorization by the following dates:

Milestone	**Deadline**
Enter Non-contingent Satellite Manufacturing Contract	July 17, 2002
Complete Critical Design Review	July 17, 2003
Begin Physical Construction of All Satellites	July 17, 2004
Complete Construction of One Satellite and Launch It Into Its Assigned Orbital Location	July 17, 2006
Certify Entire System Operational	July 17, 2007

28. IT IS FURTHER ORDERED that the Petition to Deny or Hold in Abeyance of The Boeing Company (filed May 4, 1998), and the Petition to Deny of Mobile Communications Holdings, Inc. (filed May 4, 1998) ARE DENIED.

29. IT IS FURTHER ORDERED that Celsat Inc.'s Petition for Waiver (filed April 4, 1994) IS DISMISSED as moot.

30. IT IS FURTHER ORDERED that Celsat America, Inc. will prepare any necessary submissions to the International Telecommunication Union (ITU) to initiate and complete the advance publication, international coordination, and notification process for the space station(s) authorized by this *Order*, in accordance with the ITU Radio Regulations. No protection from interference caused by radio stations authorized by other Administrations is guaranteed unless coordination procedures are timely completed or, with respect to individual Administrations, by successfully completing coordination agreements. Any radio station authorization for which coordination has not been completed may be the subject of additional terms and conditions as required to effect coordination of the frequency assignments of other Administrations. 47 C.F.R. § 25.111(b).

31. IT IS FURTHER ORDERED that this *Order* is subject to change by summary order of the Commission on 30 days' notice and does not confer any permanent right to use the spectrum.

32. IT IS FURTHER ORDERED that Celsat America, Inc. may decline this authorization as conditioned within 30 days of the date of the release of this *Order and Authorization*. Failure to respond within that period will constitute formal acceptance of the authorization as conditioned.

33. This *Order and Authorization* is issued pursuant to Section 0.261 of the Commission's rules on delegations of authority, 47 C.F.R. § 0.261, and is effective upon release.

FEDERAL COMMUNICATIONS COMMISSION

Donald Abelson
Chief, International Bureau

APPENDIX A

LIST OF PLEADINGS ADDRESSING CELSAT'S APPLICATION AND CONFORMING AMENDMENT

Filed May 4, 1998

Petition to Deny or Hold in Abeyance of The Boeing Company
Comments of Celsat America, Inc.
Comments of Constellation Communications, Inc. at 21
Consolidated Comments and Petition to Deny of Iridium LLC at 9-10
Petitions to Deny and Comments of Mobile Communications Holdings, Inc. at 16
Comments of Bell Atlantic (limited to feeder link issues)
Consolidated Petition to Deny, Petition to Defer, and Comments of GE American Communications, Inc. at 4-6 (limited to feeder link issues)
Comments of Hughes Communications Galaxy, Inc. (limited to feeder link issues)
Comments of Lockheed Martin Corporation (limited to feeder link issues)
Comments of PanAmSat Corporation (limited to feeder link issues)
Comments of the Fixed Point-to-Point Communications Section, Wireless Telecommunications Division, Telecommunications Industry Association (limited to feeder link issues)
Comments of Teledesic LLC (limited to feeder link issues)
Comments of Wireless Communications Association International, Inc.
Comments of Ericsson Inc. in support of Celsat, Inc.
Comments of North American GSM Alliance LLC

Filed June 3, 1998

Consolidated Replies and Oppositions of Celsat America, Inc.
Consolidated Reply Comments of Mobile Communications Holdings, Inc. at 17
Reply Comments of North American GSM Alliance LLC

Filed June 18, 1998

Consolidated Reply of The Boeing Company
Consolidated Response of Celsat America, Inc.
Reply of Hughes Communications Galaxy, Inc. (limited to feeder link issues)
Consolidated Reply of Iridium LLC at 9-10
Consolidated Reply Comments of North American GSM Alliance LLC
Reply of GE American Communications, Inc. at 3-4 (limited to feeder link issues)
Response of PanAmSat Corporation (limited to feeder link issues)
Response of Wireless Communications Association International, Inc. at 4

Filed December 14, 2000

Consolidated Petition to Deny of PanAmSat Corporation at 4 (limited to feeder link issues)

Filed January 16, 2001

Opposition of Celsat America, Inc.