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

In the Matter of	)	
	)	
New ICO Satellite Services G.P.	)	SAT-MOD-20061109-00137
	)	
Application to Extend Milestones	)	Call Sign S2651

MEMORANDUM OPINION AND ORDER

Adopted: February 2, 2007 **Released: February 2, 2007**

By the Chief, Satellite Division, International Bureau:

I. INTRODUCTION

1. By this Order, we grant New ICO Satellite Services G.P.'s (ICO) request for an approximately five-month extension of time to complete construction of, launch, and operate its ICO G1 satellite, which will provide 2 GHz mobile satellite service (MSS). ICO has shown that construction of the satellite is nearly complete, and that preparations for launch of the satellite are at an advanced stage. The requested extensions are brief, and will permit ICO to address and resolve unanticipated manufacturing difficulties related to a limited number of satellite components. Based on the circumstances presented, we find that grant of the extension is in the public interest.

II. BACKGROUND

2. On July 17, 2001, the International Bureau granted ICO's request for a reservation of spectrum in the 2 GHz band to provide MSS.[1] ICO was initially reserved spectrum for an MSS system comprised of twelve satellites in the non-geostationary satellite orbit (NGSO). The spectrum reservation included a milestone schedule applicable to 2 GHz NGSO satellites that required, among other things, ICO to bring its system into operation by July 17, 2007.[2]

3. In May 2005, the International Bureau authorized ICO to modify its reservation of spectrum to operate a single geostationary-satellite orbit (GSO) satellite, ICO G1, at the 91° W.L. orbital

[1] ICO Services Limited, *Order*, 16 FCC Rcd 13762 (Int'l Bur. 2001) (*ICO Spectrum Reservation Order*). This reservation was requested by New ICO's predecessor in interest, ICO Satellite Services G.P. In December 2005, the International Bureau approved a revised ownership structure involving New ICO. The term "2 GHz MSS band" in this order refers to the 2000-2020 MHz (uplink) and 2180-2200 MHz (downlink) frequencies. These frequencies are designated for the Mobile-Satellite Service in the United States. Amendment to Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, Including Third Generation Wireless Systems, *Third Report and Order, Third Notice of Proposed Rulemaking, and Second Memorandum Opinion and Order*, ET Docket No. 00-258, 18 FCC Rcd (2003).

[2] Specifically, ICO was required to execute a non-contingent satellite manufacturing contract by July 17, 2002, complete critical design review by July 17, 2003, begin physical construction of all satellites by January 17, 2004, launch two completely-constructed satellites by January 17, 2005, and certify that the entire system is operational July 17, 2007.

location, in lieu of an NGSO system.[3] The Bureau found that ICO had taken significant steps toward implementing its proposed GSO satellite, including executing a non-contingent construction contract and completing critical design review (CDR). ICO also indicated that the satellite would be launched by July 2007 and operational by July 17, 2007. This schedule, however, was inconsistent with the Commission's standard milestones for 2 GHz MSS GSO systems, under which ICO would have been required to launch the satellite by July 17, 2006. The Bureau concluded, however, that granting ICO until July 2007 to launch ICO G1 was warranted because ICO had satisfied several significant prior milestones requirements for its NGSO system, including launch of two satellites, and had demonstrated its commitment to implementation of its GSO system with substantial compliance efforts, including completion of CDR for the new system. The Bureau also concluded that the GSO construction contract specified an achievable performance schedule consistent with the prior NGSO deadline for commencing operations.[4]

4. Nonetheless, the Bureau noted that ICO's timetable for completing construction was ambitious, and adopted 10 interim milestones based on the performance schedule in its satellite construction contract to ensure its continued progress. ICO was also required to report any significant deviations from its contract schedule.[5]

5. In December 2006, the Satellite Division granted ICO's request to modify its reservation of spectrum by relocating its proposed satellite to the 92.85° W.L. orbital location.[6] In this Order, the Division determined that ICO had satisfied all eight of its milestones to date, the most recent of which was to complete main body integration by October 1, 2006.[7] ICO's next milestone was to complete reference performance testing by January 1, 2007. In November 2006, however, ICO filed its request for an extension of its four remaining milestones, beginning with its January 1, 2007 milestone.[8]

6. According to ICO, a milestone extension is necessary due to technical issues beyond its control. ICO states that the satellite manufacturer, Space Systems/Loral, Inc., detected technical problems with the manufacture of three of the satellite's subsystems.[9] The first two involve technical issues with ICO G1's subcontracted capacitors and composite waveguides which will have a "modest" impact on the schedule. ICO further states that the manufacturer reported problems with the satellite's precision oscillators that will likely result in a delay of the satellite's delivery. ICO explains that the oscillator components are integral to its innovative ground-based beam forming (GBBF) technology, which will allow adjustments to its spot beams from the ground rather than on-board the satellite.[10] Given the critical importance and physical location of the components, ICO contends that it is unlikely a plan can be implemented to keep the satellite on schedule.[11]

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[3] ICO Satellite Services G.P., *Memorandum Opinion and Order*, 20 FCC Rcd 9797 (Int'l Bur. 2005)(*ICO May Modification Order*).

[4] *ICO May Modification Order*, 20 FCC Rcd at 9804.

[5] *ICO May Modification Order*, 20 FCC Rcd at 9804.

[6] New ICO Satellite Services G.P., *Memorandum Opinion and Order*, DA 06-2545 (released Dec. 19, 2006) (*ICO December Modification Order*).

[7] *ICO December Modification Order*, DA 06-2545 at ¶ 10.

[8] New ICO Satellite Services G.P., Modification Application to Extend Milestones, File No. SAT-MOD-20061109-00137 (filed November 9, 2006) (*ICO Extension Request*). *See Public Notice*, Policy Branch Information, Report No. SAT-00402, dated Nov. 17, 2006.

[9] *ICO Extension Request* at 3.

[10] *ICO Extension Request* at 2.

[11] *ICO Extension Request* at 4.

7. Accordingly, ICO requests an extension of its complete reference performance testing milestone, from January 1, 2007, to April 30, 2007, its complete thermal vacuum test milestone, from March 1, 2007, to June 15, 2007, its launch milestone, from July 1, 2007, to November 30, 2007, and its milestone to certify its system operational, from July 17, 2007, to December 31, 2007.[12]

8. ICO states that construction of the satellite is substantially complete.[13] It notes that it has paid approximately 93 percent of the total satellite contract price.[14] In addition, ICO has contracted for the launch of ICO G1 and paid approximately 75 percent of total launch costs.[15] ICO maintains that it is not warehousing spectrum, but rather has demonstrated its commitment to completing the satellite and launching ICO G1 as soon as practicable.[16] ICO further maintains that an extension will serve the public interest by allowing ICO to implement new technology and deliver next-generation satellite service to the U.S. market in 2007, sooner than another party could. According to ICO, the Commission has granted longer extensions based on similar circumstances.[17] Finally, ICO states that the Department of Defense is scheduled to include payloads on the same launch vehicle as ICO G1. Thus, ICO asserts that an extension will give the Department more time to prepare its experimental payloads.[18]

9. Inmarsat Global Limited (Inmarsat) filed a petition to deny the extension.[19] Inmarsat maintains that the delay is within ICO's control. In allowing ICO to change to a GSO system, Inmarsat asserts that the Bureau relied on ICO's representations that the satellite design was relatively simple, and would use equipment used or developed for previous projects.[20] Inmarsat asserts that ICO, rather than adhering to a simple satellite design, amended its contract to incorporate new technologies, including GBBF, almost immediately after being authorized to change its system to a single GSO satellite. Consequently, Inmarsat asserts that the delay was due to choices made by ICO after its license was issued and not to circumstances beyond its control.[21] In addition, Inmarsat claims that ICO ultimately amended its satellite contract four times subsequent to receiving its spectrum reservation, and failed, in violation of the Commission's rules, to file any of the amendments with the Commission.[22]

10. Inmarsat asks the Commission to require ICO to submit documentation, including all amendments to its construction contract, and demonstrate that changes made are not the cause of its inability to meet its milestones.[23] Absent this showing, if the extension is granted, Inmarsat states the Commission should make clear that no further extensions will be granted if ICO does not meet its proposed deadlines and certify the system as operational by December 31, 2007.[24] In addition, Inmarsat requests that the Commission make clear that delays in building or launching the spacecraft will not be a

[12] *Id.*

[13] *Id.*

[14] New ICO Satellite Services G.P., Opposition to Petition to Deny, Filed January 4, 2007 (*ICO Response*) at 11.

[15] *Id.*

[16] *ICO Extension Request* at 7.

[17] *Id.*

[18] *ICO Extension Request* at 8.

[19] Petition to Deny of Inmarsat Global Limited, Filed December 18, 2006 (*Inmarsat Petition*).

[20] *Inmarsat Petition* at 3.

[21] *Inmarsat Petition* at 7.

[22] *Inmarsat Petition* at 8, citing 47 C.F.R. § 1.65.

[23] *Inmarsat Petition* at 10.

[24] *Id.*

basis for waiving or modifying ancillary terrestrial component (ATC) gating criteria if ICO should apply for ATC authority. Inmarsat maintains that this criteria requires ICO to have a ground spare satellite ready by December 2008, and asserts there is no indication that ICO will do so.[25]

11. TerreStar Networks, Inc. (TerreStar) filed comments in support of ICO's extension request.[26] TerreStar states that ICO's system is complex and the time needed to incorporate many system elements, including new technologies, can increase through no fault of the licensee.[27] TerreStar states that ICO has made substantial progress in implementing its system. The Commission, TerreStar maintains, should assess milestone requests considering the purpose of the milestones policy and determine whether an extension would support the Commission's goals.[28]

12. ICO responded to Inmarsat's Petition to Deny asserting four reasons why the Commission should reject Inmarsat's Petition.[29] First, ICO asserts that Inmarsat does not have standing to oppose the extension because it does not have a pending request for a 2 GHz MSS system before the Commission and therefore will not be affected the grant of ICO's application.[30] Second, ICO states the factual basis for Inmarsat's petition is wrong because ICO did not change its satellite design "mid-course." ICO states that the incorporation of GBBF technology was in fact part of the satellite design from the beginning of the project. ICO further explains that the construction delays resulted from the manufacturing and testing of components which are integral to the original satellite design.[31] Moreover, ICO states that the amendments to the contract did not contain substantial changes requiring them to be filed with the Commission.[32]

13. Third, ICO maintains that the Commission decisions relied on by Inmarsat are distinguishable because the licensees in those cases were seeking additional time to implement new technical modifications. Rather, ICO states it is requesting additional time to implement technologies that were part of its original satellite design. ICO notes that Commission precedent supports milestone extensions under these circumstances.[33] Fourth, ICO reiterates that granting its requested extension would serve the public interest because the short extension will allow ICO to introduce new technologies and next-generation 2 GHz MSS services to the public before another entity would be able to do so. Further, ICO claims that the extension is consistent with the purposes behind the milestone requirements – to ensure licensees are willing and able to proceed with satellite construction. ICO maintains that it has consistently demonstrated its commitment toward implementing its system as shown by its timely completion of eight of the 12 milestones in its authorization. Further, ICO represents that the satellite is substantially complete and most of the total contract price for the satellite is paid. It has also entered into a launch contract and over half of the launch costs.[34] Finally, ICO notes that Inmarsat's proposed

[25] *Inmarsat Petition* at 11.

[26] Comments of TerreStar Networks, Inc., Filed December 18, 2006 (*TerreStar Comments*). TerreStar is a major investor in both the satellite and ground segments for the other 2 GHz MSS satellite system for which the Commission has reserved spectrum. *See* File No. SAT-ASG-20021211-00238.

[27] *TerreStar Comments* at 3.

[28] *TerreStar Comments* at 4.

[29] *ICO Response.*

[30] *ICO Response* at 4.

[31] *ICO Response* at 7.

[32] *ICO Response* at 8.

[33] *ICO Response* at 9.

[34] *ICO Response* at 11.

conditions for granting the extension request, specifically as it concerns ICO's ATC component, are irrelevant since ICO has not applied for an ATC license or requested a waiver or modification of any ATC gating criteria.[35] Inmarsat filed a reply to ICO's opposition reiterating its legal standing to file its petition, and claiming that ICO failed to establish that the construction delays are beyond its control.[36]

III. DISCUSSION

14. We grant ICO's request. The Commission has long imposed milestones – or deadlines – for satellite system implementation. Requiring licensees to adhere to a milestone schedule ensures that licensees are proceeding with construction and will launch their satellites in a timely manner, and that valuable spectrum will not be held to the exclusion of others by licensees unwilling or unable to proceed.[37] Milestones also ensure prompt delivery of satellite service to the public. Consequently, the Commission strictly enforces its milestone schedules. Extensions may be granted when the delay is due to circumstances beyond the licensee's control, or when there are unique and overriding public interest concerns that justify an extension.[38]

15. We find that granting ICO's extension request is consistent with Commission precedent. Specifically, unanticipated technical problems with a satellite under construction constitute a circumstance beyond the licensee's control.[39] Here, ICO's request is premised on manufacturing problems with specific components. In particular, the delivery delay was caused by technical performance anomalies and manufacturing problems with the precision oscillators, which are integral to its GBBF technology.[40] The contractor represents that it is working to expedite the delivery of these components, but that these issues will require a modest revision of the delivery schedule.[41] Both ICO and its manufacturer indicate their belief that with the identification of the unexpected problems and aggressive formulation of plans to address these problems, the slightly modified milestones are achievable. In addition, the Commission has considered the extent of a satellite's construction and the amounts paid toward to the total contract price as factors in milestone extension cases.[42] The ICO G-1

[35] *Id.*

[36] Reply of Inmarsat Global Limited, filed January 11, 2007.

[37] NetSat 28 Company, LLC, *Memorandum Opinion and Order*, 19 FCC Rcd 17722 (Int'l Bur. 2004).

[38] 47 C.F.R. § 25.117(c); Intelsat LLC, *Order and Authorization*, 17 FCC Rcd 2391 (Int'l Bur. 2002).

[39] *See* Intelsat LLC, *Order and Authorization,* 17 FCC Rcd 2391 (Sat. & Radiocomm. Div., Int'l Bur. 2002) (unanticipated technical problems with a satellite under construction constitute a circumstance beyond the licensee's control justifying an extension); AMSC Subsidiary Corporation, Application for Modification of Construction Permit and License for the AMSC-1 Satellite, *Order and Authorization*, 10 FCC Rcd 3791, 3791 (Satellite and Radiocommunication Div., 1995) (short milestone extension granted to permit licensee to resolve unanticipated technical problems with antenna); American Telephone and Telegraph Company, Application for Modification of Construction Permit and License for the Telstar 402 Satellite, *Order and Authorization*, 9 FCC Rcd 2607, 2607 (Domestic Facilities Div., 1994) (short milestone extension granted to permit licensee to resolve unanticipated technical problems). In addition, the Bureau also granted Intelsat LLC a six-month extension of the launch milestone for the IA-8 satellite due to an anomaly in a similar-model satellite made by the same manufacturer. Intelsat LLC, File No. SAT-MOD-20050203-00019 (grant stamped July 17, 2005).

[40] *ICO Extension Request* at 3.

[41] *ICO Extension Request*, Attachment A, at 2.

[42] WB Holdings 1 LLC, *Memorandum Opinion and Order*, 20 FCC Rcd 10846 (Sat. Div., Int'l Bur. 2005) (construction of satellite almost complete, but contained components used in another satellite that experienced in-space anomaly therefore additional testing by the manufacturer was necessary); Intelsat LLC, *Memorandum Opinion and Order*, 19 FCC Rcd 5266 (Int'l Bur. 2004) (extension of launch milestones granted due to unanticipated manufacturing and testing delays; the satellite was 85% complete at the time of the request); Loral SpaceCom DIP, (continued....)

satellite is 85 percent complete and ICO has paid 93 percent of the payments due under the construction contract. ICO has also entered into a launch contract and paid approximately 75 percent of total launch costs.[43] ICO has provided detailed information – including photographs – regarding its satellite construction progress. Further, ICO has met all of its milestones prior to January 1 of this year, including its interim milestones.[44] Given all of these considerations, we find that a brief extension of its milestones is warranted.

16. None of the arguments raised by Inmarsat persuade us that an extension is not warranted.[45] First, Inmarsat claims that the record before the Bureau at the time it released the *ICO May Modification Order* did not include information regarding ICO's intent to employ GBBF technology.[46] Rather, Inmarsat asserts that ICO implemented a "late breaking" design change that does not justify a milestone extension.[47] Inmarsat's allegations are inconsistent with the facts. While ICO's modification application—a publicly available document—did not use the term "Ground Based Beam Forming," the application provided a technical description of the satellite that was entirely consistent with the use of GBBF.[48] The application specifically noted the "unconventional nature" of its beam design and the resulting "inherent flexibility in beam coverage." [49] Moreover, ICO's initial contract, which was dated January 10, 2005, and filed and reviewed in connection with its modification application, clearly indicates ICO's intent to employ GBBF technology.[50]

17. Second, the Commission decisions relied on by Inmarsat are inapplicable to ICO's circumstances. In each of those decisions, the licensee had requested an extension of its milestones in conjunction with requests to modify the technical terms of its authorization. The Commission denied the extension requests, finding that a license modification is a business decision within the discretion and control of the licensee. [51] Moreover, in each case, there was no evidence that the licensees had

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Memorandum Opinion and Order, 18 FCC Rcd 21851 (Int'l Bur. 2003), (one year extension granted due to technical problems that arose during spacecraft construction and testing; the satellite was approximately 80% complete and 60% funded at the time of the request).

[43] *ICO Extension Request* at 2.

[44] *ICO December Modification Order*, DA 06-2545 at ¶ 10.

[45] Because we find that none of Inmarsat's arguments warrant denial of ICO's extension request, we need not address the issue of Inmarsat's standing. See Assignment of Orbital Location to Space Stations in the Ka-band, *Memorandum Opinion and Order*, 16 FCC Rcd 8476, 8480 n.26 (Int'l Bur. 2001).

[46] Inmarsat states that GBBF technology is "not even mentioned once in the terms and conditions" of ICO's initial contract, dated January 10, 2005. *Inmarsat Petition to Deny* at 8.

[47] *Inmarsat Petition to Deny* at ii.

[48] *See, e.g.,* File No. SAT-MOD-20050110-00004, at Exhibit 1.

[49] *Id.* at 44-46 (noting difficulties in supplying Schedule S information because of "an infinite set of possible beam contours").

[50] *See* Letter to Marlene H. Dortch, Secretary, FCC from Cheryl Tritt, Counsel to ICO (May 9, 2005) requesting confidential treatment of the attached satellite contract between ICO Satellite Management LLC and Space Systems/Loral Inc., entered into January 10, 2005. Exhibit A expressly provides for "GEO Space Segment System with Ground Based Beam Forming."

[51] *See* NetSat 28 Company, LLC, *Memorandum Opinion and Order*, 19 FCC Rcd 17722 (Int'l Bur. 2004) (extension request predicated on licensee's decision to add a second satellite to its system); *PanAmSat Licensee Corp., Memorandum Opinion and Order,* 16 FCC Rcd 11534 (2001) (additional time requested as part of a request to add additional frequencies, licensee had not satisfied first milestone); Loral Space & Communications Corp., *Order*, 16 FCC Rcd 11044, 11047 (Int'l Bur. 2001) (extension requested to add additional frequencies).

commenced construction of their satellites. Extending milestones on this basis, the Commission stated, would allow licensees to "extend indefinitely their non-performance" by repeatedly modifying their systems.[52] ICO, is not however, seeking to modify its reservation of spectrum by adding new technologies, nor to substantially alter its proposed design in response to market or technological developments. Instead, ICO's request stems from concrete manufacturing issues that have arisen as it seeks to implement the design it proposed for its geostationary satellite, which is substantially complete.

18. We also reject Inmarsat's assertion that ICO has violated Commission rules by failing to submit contract amendments to the Commission. Section 1.65 of the Commission's rules requires an applicant to maintain accuracy and completeness of its application and to notify the Commission of any substantial changes that may be of decisional significance.[53] ICO did in fact file the first and second amendments to its contract, executed while its modification application remained pending.[54] We have also reviewed the revised ICO G1 satellite manufacturing contract filed as an exhibit to Inmarsat's petition to deny. While the submitted contract does differ in some respects from the contract submitted by ICO two years ago, the changes are not material, except that they reflect, as would be expected from other substantial evidence available in this record, the continued progress in development of all aspects of the ICO G1 system.

19. Finally, we address Inmarsat's request that we include, in any grant, language indicating that we will not grant any further extensions. While the Commission seeks to strictly enforce its milestones, it recognizes that there are in fact certain circumstances that may warrant an extension. We do not believe it is ever in the public interest to unequivocally state that we will not, under any circumstances, grant an extension. We note, however, that any further delays would be a cause for concern, and any further extension requests would face a substantial burden of persuasion. We also find Inmarsat's references to ICO's ATC gating criteria requirements to be premature in light of the fact that ICO has not applied for an ATC licensee.

IV. ORDERING CLAUSES

20. Based on the progress ICO has made and the technical difficulties it has encountered, we grant ICO an extension of its remaining milestones.

21. Accordingly, IT IS ORDERED, that New ICO Satellite Services G.P.'s Modification Application to Extend Milestones, File No. SAT-MOD-20061109-00137 (Call Sign 2651), is GRANTED. New ICO Satellite Services G.P.'s reservation of spectrum is modified to reflect the following milestones:

Milestone	New Date
Complete reference performance test	April 30, 2007
Complete thermal vacuum test	June 15, 2007

[52] Loral Space and Communications Corp., 16 FCC Rcd at 11047.

[53] 47 C.F.R. § 1.65.

[54] *See* Letter to Marlene H. Dortch, Secretary, FCC, from Cheryl A. Tritt, Counsel for ICO (Sept. 1, 2005). These amendments involved changes, not of decisional significance, to details of the contract's payment terms, payment schedule, termination liability, and performance incentives, to provisions concerning ground segment components, including GBBF ground segment, and to details of satellite construction.

Launch Satellite	November 30, 2007
Certify that entire system is operational	December 31, 2007

22. IT IS FURTHER ORDERED that New ICO Satellite Services G.P. must complete construction and launch its satellite in accordance with the parameters of its reservation of spectrum, as modified, or its authorization shall be rendered null and void.

23. IT IS FURTHER ORDERED that the Petition to Deny filed by Inmarsat Global Limited is DENIED.

24. New ICO Satellite Services G.P. is afforded 30 days from the date of this Order to decline this authorization as conditioned. Failure to respond within this period will constitute a formal acceptance of the authorization as conditioned.

25. This Order is issued pursuant to the Commission's rules on delegated authority, 47 C.F.R. § 0.261, and is effective upon release.

FEDERAL COMMUNICATIONS COMMISSION

Robert G. Nelson
Chief, Satellite Division
International Bureau