

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

In the Matter of)	
)	
New ICO Satellite Services G.P.)	File Nos. SAT-MOD-20050926-00182
)	SAT-AMD-20050927-00186
Application for Modification of Authority for)	SAT-AMD-20060505-00054
Use of the 2 GHz Bands to Provide Mobile)	
Satellite Service)	Call Sign S2651

To the International Bureau:

PETITION FOR PARTIAL RECONSIDERATION

Pursuant to Section 1.106 of the Commission’s rules, 47 C.F.R. § 1.106, New ICO Satellite Services G.P. (“ICO”) submits this petition for partial reconsideration (“Petition”) of the memorandum opinion and order by the Satellite Division of the International Bureau (“Bureau”) in the above-captioned proceeding.¹ Specifically, ICO seeks reconsideration of the Bureau’s denial of ICO’s request for waiver of Section 25.202(g) of the Commission’s rules² to permit use of C-band frequencies on a non-harmful interference basis for the limited purpose of conducting telemetry, tracking, and command (“TT&C”) operations during the brief period required for transfer orbit operations and in-orbit testing.³ ICO is not seeking reconsideration of the Bureau

¹ See *New ICO Satellite Services G.P.*, DA 06-2545 (Int’l Bur. Dec. 19, 2006) (“*ICO Modification Order*”).

² Section 25.202(g) provides that “[t]elemetry, tracking and telecommand functions for U.S. domestic satellites shall be conducted at either or both edges of the allocated band(s).” 47 C.F.R. § 25.202(g). This provision requires satellite operators to conduct TT&C operations in the same frequency bands in which they operate fixed satellite service (“FSS”) links. See *Echostar Satellite LLC*, 20 FCC Rcd 4281, ¶ 6 (Int’l Bur. 2005) (“*Echostar Order*”).

³ In its above-captioned modification application (“Application”), ICO requested a waiver to permit use of certain C-band frequencies (*i.e.*, 1 MHz of spectrum within each of the 5925-5930 MHz and 6420-6425 MHz band and 300 kHz of spectrum within each of the 3700-3705 MHz and 4195-4200 MHz bands) for TT&C operations “under limited or emergency circumstances,” such as during transfer orbit or spacecraft emergencies involving a temporary or permanent failure of the Ka-band TT&C subsystem. See Application, Attachment A at 4. ICO clarifies that its *Footnote continues...*

decision with respect to ICO's request for C-band TT&C use during spacecraft emergencies, but may renew that request in the future, as necessary.

ICO's waiver request is limited in scope and duration. Grant of the requested waiver will serve the purposes of Section 25.202(g) and the public interest, and is consistent with Commission precedent. Accordingly, the Bureau should grant ICO's request for a limited waiver of Section 25.202(g) to permit C-band TT&C operations on a non-harmful interference basis during transfer orbit and in-orbit testing.

I. THE COMMISSION SHOULD GRANT A LIMITED WAIVER OF SECTION 25.202(g)

The Commission may waive its rules upon a showing of "good cause."⁴ Waiver is appropriate if (1) special circumstances warrant a deviation from the general rule, and (2) the deviation better serves the public interest than strict adherence to the rule.⁵ Special circumstances warranting a waiver may include "considerations of hardship, equity, or more effective implementation of overall policy."⁶ Moreover, the Commission may waive a rule in a particular case if the relief requested would not undermine the policy objective of the rule and would serve the public interest.⁷

A. Special Circumstances Warrant A Limited Waiver In This Case

In this case, good cause and, specifically, special circumstances warrant the grant of a limited waiver of Section 25.202(g) of the Commission's rules to permit C-band TT&C

request for C-band TT&C operations was intended to extend to the brief period required for in-orbit testing in addition to transfer orbit.

⁴ 47 C.F.R. § 1.3.

⁵ *Northeast Cellular Telephone Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990) (citing *WAIT Radio v. FCC*, 418 F.2d 1153, 1158 (D.C. Cir. 1969), *cert. denied*, 409 U.S. 1027 (1972)).

⁶ *WAIT Radio*, 418 F.2d at 1159.

⁷ *Id.* at 1157.

operations during transfer orbit and in-orbit testing. For the ICO G1, access to an extensive network of ground station facilities is required during transfer orbit in order to maintain continuous contact, which in turn will ensure that critical operations are completed while the ICO G1 satellite maintains sufficient power, and also to reduce risk to the spacecraft should any anomalies arise.⁸ This access cannot be accomplished by using Ka-band frequencies because extremely limited Ka-band ground facilities exist worldwide to support TT&C operations during the transfer orbit period. Thus continuous contact with the satellite cannot be maintained by relying upon Ka-band facilities.

Continuous contact with ground facilities is essential during this period to perform a number of critical functions using battery power, before that battery power is depleted. Spacecraft functions for the ICO G1 are sustained by battery power prior to full deployment of the solar arrays, which occurs within two to three hours after launch. Accordingly, during transfer orbit, the ICO G1 satellite must use battery power to perform the various transfer orbit spacecraft functions, to address any anomalies in the power subsystem or attitude control subsystem that might arise, and to stabilize the ICO G1 satellite upon separation from the launch vehicle while it is being properly positioned in its orbital location prior to deployment of the solar arrays.

Continuous contact between the ICO G1 satellite and ground facilities can be achieved effectively only through use of the C-band. In contrast to the limited Ka-band ground facilities, many C-band ground facilities are available to ICO throughout the world, including at least two stations within the U.S. Access to these facilities would ensure continuous contact during the

⁸ Additionally, the use of C-band frequencies for TT&C functions during transfer orbit operations is prudent because those frequencies are generally more reliable than Ka-band frequencies under a wider variety of weather conditions – an important consideration during the critical transfer orbit operations of the satellite.

critical hours after launch. This global network of ground stations is therefore essential for the mission, especially in the event of any serious anomalies prior to the solar array deployment in the first orbit.

Unlike the ICO G1 satellite, many other satellites can operate with a more limited network of ground station facilities because they do not lose battery power during the initial launch phase or do not require active attitude electronics or thrusters to keep the satellite properly oriented. These satellites do not require quick deployment of the solar arrays because they receive more power relative to battery drain from their non-deployed solar arrays. Thus, spacecraft communications with ground facilities can be spaced hours, or even days, apart because there is no net battery drainage and the satellites' safe status can be maintained with little or no contact with ground facilities. For these satellites, the lack of continuous communications due to the limited worldwide availability of ground station facilities has little impact on transfer orbit operations. In contrast, access to the more extensive network of C-band ground station facilities is important for the ICO G1 satellite to maintain continuous communications with ground control operations while conserving battery power throughout the transfer orbit period, and to complete the launch sequence in the shortest possible time period and the lowest possible risk prior to deployment of the solar arrays.

The ICO G1 satellite also requires access to C-band ground station facilities to support the in-orbit testing of the satellite system, including verification of S-band and Ka-band antenna performance. The Ka-band antenna to be used for normal on-station TT&C operations does not have sufficient functionality to verify full antenna performance. The use of the C-band TT&C frequencies during in-orbit testing is therefore necessary to verify the proper function of the ICO space and ground segments, and to serve as back-up for Ka-band TT&C operations during the

testing phase. ICO's inability to access C-band frequencies in the United States during in-orbit testing could preclude successful completion of in-orbit testing of the satellite. Importantly, this testing would be for a limited period after launch.

B. Grant Of The Requested Waiver Will Serve The Purposes Of The Rule And The Public Interest

Grant of a limited waiver of Section 25.202(g) will not undermine, but rather will more effectively implement the purposes of the rule and better advance the public interest than strict adherence to the rule. As the Bureau noted, the purposes of Section 25.202(g) are (1) to "simplify the coordination process among satellites at adjacent orbit location by limiting the number of potentially affected operators," and (2) to "allow[] operators to maximize the efficiency of a system's TT&C operations."⁹

Here, a waiver would serve both purposes. First, grant of the requested waiver will not frustrate the purpose of simplifying the coordination process because, as the Bureau noted, ICO completed coordination with Intelsat, which operates in the C-band at 93° W.L.¹⁰ In addition, the ICO G1 C-band TT&C frequencies are independently selectable in 250 kHz increments over 5 MHz bandwidth at the band edges, and can be changed in orbit if required, allowing additional flexibility to coordinate any temporary use of the C-band frequencies.¹¹ ICO also entered into coordination discussions with SES Americom, which operates at 89° W.L. and 101° W.L., and with other adjacent non-U.S. operators. Therefore, ICO's proposed C-band TT&C operations

⁹ *ICO Modification Order*, ¶ 13.

¹⁰ *Id.* ¶ 15 n.43. The coordination agreement with Intelsat covers Intelsat C-band operations at the 93° W.L., 89° W.L., and 97° W.L. locations, as well as the C-band operations of its wholly owned subsidiary, PanAmSat, at the 91° W.L., 95° W.L., and 99° W.L. locations.

¹¹ ICO implemented this unprecedented level of TT&C flexibility into ICO G1 so that it could easily coordinate with adjacent satellites, whatever their TT&C frequencies may be, and insure that the use of the C-band would always be on a non-harmful interference basis.

will not raise any interference concerns because ICO will conduct those operations on a non-harmful interference basis and has coordinated, and will continue to coordinate, with potentially affected adjacent C-band satellite operators.

Second, grant of the requested waiver will maximize system efficiency because, as discussed above, ICO's proposed C-band TT&C operations will facilitate the proper functioning of the space and ground segments during transfer orbit and in-orbit testing. The proposed C-band TT&C operations also will be limited in scope and duration. Specifically, ICO seeks access to a total of only 1.3 MHz of spectrum (in each direction) in the C-band, and only during limited periods involving transfer orbit operations or in-orbit testing. The C-band TT&C link will be deactivated immediately once the ICO G1 satellite achieves its authorized orbital location and completes in-orbit testing.

C. Grant Of The Requested Waiver Is Consistent With Commission Precedent

Under similar circumstances as those presented here, the Commission has granted a waiver of Section 25.202(g) to a number of other satellite operators. For example, in *Astrolink International LLC*, the Commission granted a Ka-band licensee's request to use extended C-band frequencies for its TT&C operations.¹² In doing so, the Commission concluded that the licensee's request did not present substantial coordination concerns because the licensee "has conducted preliminary discussions with satellite operators at adjacent orbital locations, and has adjusted its TT&C frequency plan to address potential coordination difficulties."¹³ In a subsequent decision, the Commission noted that the licensee's request in *Astrolink* did not raise

¹² See *Astrolink International LLC*, 15 FCC Rcd 23738, ¶ 5 (Int'l Bur. 2000).

¹³ *Id.* ¶ 9.

any significant efficiency concerns because the licensee “requested only 2.7 megahertz of C-band spectrum for TT&C at each [orbital] location.”¹⁴

Additionally, in *Echostar Satellite LLC*, the Commission waived Section 25.202(g) to allow the licensee to use Ku-band frequencies for TT&C operations during launch and transfer orbit.¹⁵ The Commission concluded that a waiver would not undermine the purpose of the rule “because of the short term nature of the proposed Ku-band TT&C operations and its non-harmful interference status.”¹⁶ Similarly, in *DIRECTV Enterprises, LLC*, the Commission granted a waiver to permit the licensee to conduct transfer orbit TT&C operations in the 14 GHz band, which was outside of licensee’s assigned FSS frequencies in the 17 GHz band.¹⁷ The Commission found that “the lack of 17 GHz DBS-band TT&C facilities around the world, and the presence of 14 GHz FSS-band TT&C facilities” constituted special circumstances warranting a waiver.¹⁸

Because the Commission has allowed other licensees to conduct TT&C operations outside of their assigned FSS frequencies under similar circumstances, a waiver also should be granted in this case to ensure fair and nondiscriminatory regulatory treatment. The Commission’s waiver decisions must comport with its treatment of similarly situated parties.¹⁹

¹⁴ *WB Holdings I LLC*, 17 FCC Rcd 8217, ¶ 13 (Int’l Bur. 2002) (discussing and distinguishing *Astrolink* from case at hand, in which the Commission found that a waiver of Section 25.202(g) would not advance spectrum efficiency purpose of the rule because licensee requested 14 MHz of spectrum for C-band TT&C operations).

¹⁵ See *Echostar Order*, ¶ 9.

¹⁶ *Id.* ¶ 8.

¹⁷ See *DIRECTV Enterprises, LLC*, 19 FCC Rcd 7754, ¶ 14 (Int’l Bur. 2004).

¹⁸ *Id.*

¹⁹ See *Airmark Corp. v. FAA*, 758 F.2d 685, 691 (D.C. Cir. 1985) (“Deference to agency authority or expertise, however, is not a license to ... treat like cases differently.”) (internal quotations omitted); *Freeman Engineering Associates, Inc. v. FCC*, 103 F.3d 169, 180 (D.C. Cir. 1997) (finding that FCC’s interpretation of its rules was reasonable, but nonetheless vacating its decision denying applicant’s request for “pioneer’s preference” because of *Footnote continues...*

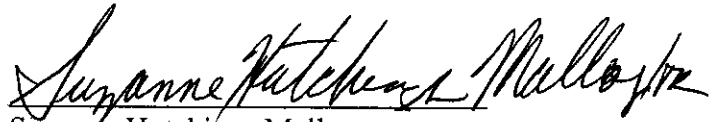
Moreover, any differential treatment must be supported by reasoned analysis.²⁰ The Commission's obligation to extend fair and nondiscriminatory treatment to all satellite licensees thus requires grant of ICO's waiver request.

II. CONCLUSION

Based upon the foregoing, ICO urges the Bureau to reconsider its decision and grant ICO's request for a limited waiver of Section 25.202(g) to permit C-band TT&C operations on a non-harmful interference basis during transfer orbit and in-orbit testing.

Respectfully submitted,

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inconsistent application of the rule interpretation); *Melody Music, Inc. v. FCC*, 345 F.2d 730, 732-33 (D.C. Cir. 1965) (ruling that FCC's refusal to explain disparate treatment of appellant and another licensee "was error").

²⁰ See *Northpoint Technology, Ltd. v. FCC*, 412 F.3d 145, 155 (D.C. Cir. 2005) (FCC's disparate regulatory treatment of two types of satellite services "is premised on an insignificant distinction"); *Petroleum Communications, Inc. v. FCC*, 22 F.3d 1164, 1172 (D.C. Cir. 1994) ("We have long held that an agency must provide an adequate explanation before it treats similarly situated parties differently."); *Melody Music*, 345 F.2d at 733 (FCC must "do more than enumerate factual differences, if any, between appellant and the other cases; it must explain the relevance of those differences").

CERTIFICATE OF SERVICE

I hereby certify that on January 18, 2007 a copy of the foregoing **Petition for Partial Reconsideration** was served by electronic mail upon the following:

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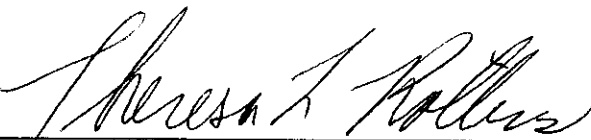
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