

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

In the Matter of)	
)	File Nos. SAT-LOI-20081113-00216
Spectrum Five LLC)	SAT-AMD-20091026-00113
)	
Petition for Declaratory Ruling to Serve the)	Call sign: S2777
U.S. Market from the 118.8° W.L. Orbital)	
Location in the 17/24 Broadcasting Satellite)	
Service Band)	

AMENDMENT

Spectrum Five LLC (“Spectrum Five”) files this amendment to conform its pending petition for declaratory ruling seeking U.S. market access for a Netherlands-licensed 17/24 GHz satellite at the nominal 119° W.L. orbital¹ to the Commission’s new licensing rules and policies.² Specifically, this amendment seeks to: (1) shift the requested orbital location from 118.8° W.L. to 119.25° W.L. to provide a minimum 0.2° separation with DBS space stations; and (2) provide predicted transmitting off-axis antenna gain data for its proposed 17/24 GHz satellite.³ This amendment includes approximately 9000 pages of technical data relevant to Section 25.264(a). Spectrum Five is providing this information before the new rule’s effective date to facilitate prompt grant of its pending petition, which is currently the only application seeking to use 17/24

¹ *In the Matter of Spectrum Five LLC Petition for Declaratory Ruling to Serve the U.S. Market from the 118.8° W.L. Orbital Location in the 17/24 Broadcasting Satellite Service Band, Petition for Declaratory Ruling, File Nos. SAT-LOI-20081113-00216, SAT-AMD-20091026-00113 (filed Nov. 13, 2008) (“Petition”).*

² *Establishment of Policies and Service Rules for the Broadcasting-Satellite Service at the 17.3-17.7 GHz Frequency Band and at the 17.7-17.8 GHz Frequency Band Internationally, and at the 24.75-25.25 GHz Frequency Band for Fixed Satellite Services Providing Feeder Links to the Broadcasting-Satellite Service and for the Satellite Services Operating Bi-directionally in the 17.3-17.8 GHz Frequency Band, 26 FCC Rcd 8927 (2011) (“17/24 GHz BSS Second R&O”).*

³ 47 C.F.R. § 25.264(a).

GHz frequencies at the nominal 119° W.L. orbital location.⁴

I. REQUEST FOR THE 119.25° W.L. ORBITAL LOCATION

Spectrum Five amends its pending Petition to request operations at 119.25° W.L. in order to comply with the FCC's new requirement for a minimum orbital separation of 0.2° between 17/24 GHz BSS and DBS space stations.⁵ Spectrum Five had previously sought authority to operate at 118.8° W.L., as public information showed that the closest DBS satellite was 0.2° away. Today, however, publicly available information shows that DBS space stations are now located at 118.9° W.L. (EchoStar 14), 118.8° W.L. (EchoStar 7), and 119.05° W.L. (DIRECTV 7S).⁶ Consequently, Spectrum Five seeks authority to operate its 17/24 GHz satellite at 119.25° W.L. to maintain a minimum orbital separation of 0.2° from the DBS space station at 119.05° W.L. The technical information previously provided to the Commission in File No. SAT-LOI-20081113-00216 remains unchanged by the requested slight shift in orbital location and is hereby incorporated by reference.⁷

⁴ Spectrum Five appreciates the Commission's recognition that any defects in this early filing will not be grounds for dismissal. 17/24 GHz BSS Second R&O, n.184 ("If off-axis antenna gain data and associated information is filed prior to the effective date of these rules, defects in the off-axis antenna gain data will not be ground for dismissal").

⁵ See 47 C.F.R. § 25.264(g).

⁶ See Policy Branch Information; Actions Taken, Report No. SAT- 00384, DA 06-1752, File No. SAT-MOD-20060616-00065 (Sept. 1, 2006) (Public Notice) (authorizing DIRECTV Enterprises, LLC's to operate the DIRECTV 7S satellite at 119.05° W.L.); Policy Branch Information; Actions Taken, Report No. SAT- 00687, DA 10-785, File No. SAT-MOD-20100212-00027 (May 7, 2010) (Public Notice) (noting that DISH Operating L.L.C. is authorized to operate the EchoStar 14 satellite at 118.9° W.L.); Policy Branch Information; Actions Taken, Report No. SAT-00810, DA 11-1597, File No. SAT-STA-20110804-00144 (Sept. 23, 2011) (Public Notice) (authorizing DISH Operating L.L.C. to operate the EchoStar 7 satellite at 118.8° W.L.).

⁷ Spectrum Five's underlying application to operate at 118.8° W.L. proposed reduced power and reduced interference protection since Pegasus Development DBS Corporation ("Pegasus") had a previously filed application for a 17/24 GHz BSS authorization at the 115.0°

II. SUBMISSION OF OFF-AXIS ANTENNA GAIN INFORMATION

New Section 25.264(a) requires the submission of predicted transmitting antenna off-axis antenna gain information:

- (1) In the X-Z plane, i.e., the plane of the geostationary orbit, over a range of 30 Degrees from the positive and negative X-axes in increments of 5 degrees or less.
- (2) In planes rotated from the X-Z plane about the Z-axis, over a range of up to 60 degrees relative to the equatorial plane, in increments of 10 degrees or less.
- (3) In both polarizations.
- (4) At a minimum of three measurement frequencies determined with respect to the entire portion of the 17.3-17.8 GHz frequency band over which the space station is designed to transmit: 5 MHz above the lower edge of the band; at the band center frequency; and 5 MHz below the upper edge of the band.
- (5) Over a greater angular measurement range, if necessary, to account for any planned spacecraft orientation bias or change in operating orientation relative to the reference coordinate system. The applicant must also explain its reasons for doing so.

Spectrum Five submits the requested antenna data predictions for its proposed space station in the attached technical materials.⁸ The required information is produced for a CONUS

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W.L. Appendix F location. *See Petition* at 2. Because there is no previously filed application for authority to operate a 17/24 GHz BSS satellite at the 123° W.L. Appendix F location, Spectrum Five is eligible to operate its proposed satellite at 119.25° W.L. at full power. However, to facilitate prompt grant, Spectrum Five seeks authority to operate at 119.25° W.L. within the same technical parameters previously submitted.

⁸ Because Spectrum Five does not plan for any spacecraft orientation bias or change in operating orientation relative to the reference coordination system, it does not provide predictions over a greater angular measurement range as specified in Section 25.264(a)(5). *See* 47 C.F.R. § 25.264(a). Similarly, because the power flux density of Spectrum Five's proposed space station will not exceed the coordination trigger of -117 dB W/m²/100 kHz at the location of any prior-filed U.S. DBS space station, Spectrum Five has not provided the calculation

beam and 53 spot beams. Consistent with the new rule, for each such beam, the predictions were made in both polarizations (*i.e.*, RHCP and LHCP) at three measurement frequencies in the 17.3-17.8 GHz frequency band over which its proposed space station is designed to transmit.⁹ The data is calculated over a range of +/- 30 degrees from the X axis in the X-Z plane, and over a range of +/- 60 degrees in planes rotated about the Z axis.

III. REQUEST FOR WAIVER OF SECTION 25.116 TO THE EXTENT NECESSARY

The Commission may waive a rule for good cause shown.¹⁰ It is well established that waiver is appropriate if special circumstances warrant a deviation from the general rule, and such deviation would better serve the public interest than would strict adherence to the general rule.¹¹ Generally, the Commission may grant a waiver of its rules in a particular case if the relief requested would (1) not undermine the policy objective of the rule in question; and (2) otherwise serve the public interest.¹²

To the extent necessary and out of an abundance of caution, Spectrum Five requests a waiver of Section 25.116 of the Commission's rules to make the requested slight change in orbital location while maintaining its current place in the satellite application processing queue. Pursuant to Section 25.116(d), any application for a GSO-like satellite license will be considered

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otherwise required in Section 25.264(b). *See* 47 C.F.R. § 25.264(b).

⁹ The attached technical materials note frequencies 17.3 GHz, 17.5 GHz, and 17.7 GHz that have been rounded down.

¹⁰ 47 C.F.R. § 1.3.

¹¹ *Northeast Cellular Telephone Co. v. FCC*, 897 F.2d 1166 (D.C. Cir. 1990).

¹² *WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969); *Dominion Video Satellite, Inc., Order and Authorization*, 14 FCC Rcd 8182 (Int'l Bur. 1999).

a newly filed application if it is amended by a major amendment,¹³ which may include changes in an orbital location.¹⁴ Granting a waiver here would be consistent with Commission policy. In this case, Spectrum Five's requested change in orbital location is necessary to comply with newly released rules requiring 0.2° spacing.¹⁵ Moreover, no other satellites currently in the processing queue seek to operate a 17/24 GHz BSS satellite at the nominal 119° W.L. orbital location.¹⁶

IV. CONCLUSION

For the foregoing reasons, Spectrum Five requests prompt grant of its pending Petition pursuant to its original application and this amendment.

Respectfully submitted,

Spectrum Five LLC

By: /s/ David Wilson

David Wilson
President
SPECTRUM FIVE LLC

¹³ 47 C.F.R. § 25.116(d).

¹⁴ 47 C.F.R. § 25.116(b)(1).

¹⁵ See 47 C.F.R. § 25.264(g).

¹⁶ See *In the Matter of 95 LICENSE SUBSIDIARY, LLC, Authority to Construct, Launch, and Operate a Broadcasting-Satellite Service System, Amendment Application*, File No. SAT-AMD-20110503-00084, note 1 (stamp grant with conditions, Aug. 30, 2011) (dismissing a waiver request as moot “because no other 17/24 GHz BSS applications were filed that might affect 95 Licensee’s place in the Commission’s processing queue.”).

ENGINEERING CERTIFICATION

The undersigned hereby certifies to the Federal Communications Commission as follows:

- (i) I am the technically qualified person responsible for the engineering information contained in the foregoing Application,
- (ii) I am familiar with Part 25 of the Commission's rules, and
- (iii) I have either prepared or reviewed the engineering information contained in the foregoing Application, and it is complete and accurate to the best of my knowledge and belief.

Signed:

/s/ Thomas E. Sharon

Dr. Thomas E. Sharon, COO

December 23, 2011