

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

In the Matter of)	
)	
EchoStar 77 Corporation)	Call Sign E050196
)	
Amendment to Application to Modify Blanket)	File No. SES-MFS-20110707-00793
Earth Station License to Add QuetzSat-1, a)	
Mexican-Licensed DBS Satellite at 77° W.L., as)	
a Point of Communication)	

**AMENDMENT TO APPLICATION
TO MODIFY BLANKET EARTH STATION AUTHORITY**

EchoStar 77 Corporation (“EchoStar 77”) submits this minor amendment to its request to modify its authority to operate 1,000,000 receive-only earth stations in the United States to receive Direct Broadcast Satellite (“DBS”) service from the nominal 77° W.L. orbital location allotted by the International Telecommunication Union (“ITU”) to Mexico. Specifically, EchoStar 77 has learned from the QuetzSat-1 operator that the cross-polarization isolation over certain regions of the satellite’s coverage area deviates by a somewhat larger amount than previously known from the minimum 30 dB required by Sections 25.215 (for DBS) and 25.210(i)(1) (for Fixed-Satellite Service) of the Commission’s rules, and does so over certain additional territory.¹ Nevertheless, the additional shortfall does not create any risk of

¹ 47 C.F.R. § 25.215 (“Space station antennas operating in the Direct Broadcast Satellite Service must be designed to provide a cross-polarization isolation such that the ratio of the on-axis co-polar gain to the cross-polar gain of the antenna in the assigned frequency band shall be at least 30 dB within its primary coverage area.”); *id.* § 25.210(i) (“Space station antennas in the Fixed-Satellite Service . . . must be designed to provide a cross-polarization isolation such that the ratio of the on axis co-polar gain to the cross-polar gain of the antenna in the assigned frequency band shall be at least 30 dB within its primary coverage area.”).

interference with nearby, co-frequency DBS slots, and creates only insubstantial amounts of self-interference that have already been factored into the submitted link budgets.

EchoStar 77 previously understood that the cross polarization isolation would fall short of Commission standards only over certain small regions of the United States, and then only to a limit of just over 27 dB. Consistent with this understanding, in its Application, EchoStar 77 requested a waiver of Sections 25.215 and 25.210(i)(1) of the rules to the extent this limited shortfall required. EchoStar 77 now asks to amend its Application to request a waiver of Sections 25.215 and 25.210(i)(1) of the rules to permit operation of QuetzSat-1 with the following limits of cross polarization isolation performance:

- West Antenna: 26.5 dB in CONUS; 26.2 dB outside CONUS
- East Antenna: 25.2 dB in CONUS

The above parameters represent the worst-case scenarios of cross-polarization isolation performance. For most of the transponders providing service over most of the coverage area, performance will meet Commission requirements. It is only certain transponders over certain regions, usually nearer the edges of the coverage region, where cross-polarization isolation will fall below 30 dB, but not below the above limits.

Commission rules may be waived if there is good cause to do so.² Even with this increased variance from the Commission's cross-polarization isolation standards, this waiver request remains in line with previous waivers granted by the Commission.³ As the International

² See 47 C.F.R. § 1.3; *WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969).

³ See EchoStar Satellite Operating Corp., *Order and Authorization*, 21 FCC Rcd. 14780 ¶ 6-7 (2006) (waiving the cross polarization requirement when satellite performed with cross polarization isolation of 22 dB in the downlink bands and 20 dB in the uplink bands) (“*EchoStar 9 Lower Ka-band Order*”); see also DIRECTV Enterprises LLC, *Order and Authorization*, 20 FCC Rcd. 15778, 15779 ¶ 7 (2005) (waiving Section 25.215 when the cross-polarization

Bureau explained in one case, “[l]icensees may use cross-polarization isolation different from that specified for the Region 2 BSS Plan if they demonstrate that such a difference does not result in interference to other operational or planned systems, including U.S. licensed systems.”⁴

This is the case here. The 3-5 dB shortfall creates insubstantial amounts of self-interference that have already been factored into the link budgets submitted with Schedule S. The shortfall will not create any interference to adjacent, co-frequency DBS orbital slots, the nearest of which is in excess of four degrees away at 72.7° W.L. EchoStar 77 hereby certifies that, except as described in this amendment request, no information in its modification application has changed. Accordingly, consistent with past precedent, a waiver of Sections 25.215 and 25.210(i)(1) of the Commission’s rules is still warranted here.

Respectfully submitted,

/s/

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isolation of DIRECTV 5’s DBS antennas was typically 27 dB over the satellite’s primary coverage area); Star One S.A., *Order*, 19 FCC Rcd. 16334 ¶ 12 (2004); New Skies Satellites N.V., *Order*, 17 FCC Rcd. 10369 ¶ 19 (2002) (waiving the cross polarization isolation requirement when the satellite’s performance was in the range of 25-30 dB).

⁴ DIRECTV Enterprises LLC, 20 FCC Rcd. at 15779 ¶ 7.

**CERTIFICATION OF PERSON RESPONSIBLE FOR PREPARING
ENGINEERING INFORMATION**

I, Krish Jonnalagadda, hereby certify under penalty of perjury that I am the technically qualified person responsible for preparation of the technical information contained in the foregoing document; that I am familiar with the technical requirements of Part 25; and that I either prepared or reviewed the technical information contained in the exhibit and that it is complete and accurate to the best of my knowledge, information and belief.

_____/s/_____
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