

Attachment 1
Explanation of Amendment

ViaSat, Inc. (“ViaSat”) files this amendment to the application it filed on July 22, 2011 to seek a radiofrequency license from the Commission for the Ka-band telemetry transmitter and command receiver on the ViaSat-1 satellite, as well as for the autotrack and downlink beacons. *See* IBFS File No. SAT-LOA-20110722-00132 (“TT&C License Application”). For administrative convenience, this amendment withdraws the Schedule S included with the TT&C License Application, and instead incorporates by reference the information already on file for this satellite in connection with ViaSat’s Letter of Intent for the ViaSat-1 satellite, including the Schedule S filed in IBFS File No. SAT-AMD-20080623-00131 (the “First LOI Amendment Schedule S”), except that:

- ViaSat supplements the information in the First LOI Amendment Schedule S by submitting with this amendment updated GXT files for the command uplink, telemetry downlink, and autotrack beacon uplink beams (designated as TCR, TCL, TMR, TML, BNR, and BNL).¹ These updated gain contour diagrams reflect the data from ViaSat’s satellite manufacturer about the actual beam characteristics of ViaSat-1.
- ViaSat provides an additional GXT file (“BCNR”) for the downlink beacon on the ViaSat-1 satellite, which is designed to utilize a beacon horn. Section 10(f) of the First LOI Amendment Schedule S incorrectly associates the downlink beacon (transponder ID BN2, Channel No. BCN2) with a gateway downlink beam (“GWDR”) instead of the beacon horn beam that has been part of the satellite’s design. Providing the details of this beacon horn beam requires an additional entry in each of Section 7 and Section 8 of the First LOI Amendment Schedule S, as shown below.
- The Technical Annex filed with the First LOI Amendment Schedule S references four command channels (two polarizations at each of two center frequencies). *See* IBFS File No. SAT-AMD-20080623-00131, Technical Annex, § A.8. However, Section 10 of the First LOI Amendment Schedule S specifies only two of these channels. Section 10 of the First LOI Amendment Schedule S should have contained the entries for two additional command channels, as shown below.

To the extent necessary, ViaSat requests a waiver of Section 25.114(c) of the Commission’s rules, 47 C.F.R. § 25.114(c) (requiring certain satellite technical specifications to be filed using the Schedule S) to permit ViaSat to provide the additional technical information specified herein without an accompanying Schedule S. There is good cause to grant such a waiver due to the limited nature of that information. Incorporating by reference Schedule S information already on file with the Commission and providing discrete technical updates and additions within this narrative attachment simplifies and promotes efficiency in processing the TT&C License Application.

ViaSat also provides an amended and restated Exhibit E to the TT&C License Application, which replaces the original exhibit in its entirety.

¹ The GXT files for these beams included in the First LOI Amendment Schedule S reflect composite characteristics of the gateway beams using gain performance data provided in the critical design review of the ViaSat-1 satellite.

Additional Schedule S Entries

Section 7²:

(a) Beam ID	(b) T/R Mode	Isotropic Antenna Gain		(e) Pointing Error (Degrees)	(f) Rotational Error (Degrees)	(g) Min. Cross-Polar Isolation (dB)	(h) Polarization Switchable? (Y/N)	(i) Polarization Alignment Rel. Equatorial Plane (Degrees)	(j) Service Area ID	Transmit		
		(c) Peak (dBi)	(d) Edge (dBi)							(k) Input Losses (dB)	(l) Effective Output Power (W)	(m) Max. EIRP (dBW)
BCNR	T	24.4	20.8	0.05	0.05	30	N		SA1	2.4	0.91	24

Section 8:

(a) Beam ID	(b) T/R Mode	(c) Co-or Cross Polar Mode ("C" or "X")	(d) GSO Ref. Orbital Longitude (Deg. E/W)	(e) NGSO Antenna Gain Contour Description	(f) GSO Antenna Gain Contour File (GXT File)	Max. Power Flux Density (dBW/m ² /Hz)				
						At Angle of Arrival above horizontal (for emission with highest PFD)				
						(g) 5 Deg	(h) 10 Deg	(i) 15 Deg	(j) 20 Deg	(k) 25 Deg
BCNR	T	C	-115.1		BCNR.gxt	-139.6	-139.5	-139.3	-139.1	-138.9

Section 10:

(a) Transponder ID	(b) Transponder Gain (dB)	Receive Band		Transmit Band	
		(c) Channel No.	(d) Beam ID	(e) Channel No.	(f) Beam ID
TC7		CMD3	OMNUR		
TC8		CMD4	OMNUL		

² "Receive" columns (n) – (r) are not applicable and have been omitted from the table.