

**DUPLICATE**



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December 11, 2009 **FILED/ACCEPTED**

DEC 11 2009

**BY HAND DELIVERY**

Federal Communications Commission  
Office of the Secretary

Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 Twelfth Street, S.W.  
Washington, D.C. 20554

**Re: Hughes Network Systems, LLC  
Clarification/Erratum for SPACEWAY 4 Letter of Intent  
File No. SAT-LOI-20091110-00119, Call Sign S2798**

Dear Ms. Dortch:

On November 10, 2009, Hughes Network Systems, LLC (“Hughes”) submitted the above-referenced Letter of Intent filing for a new Ka-band fixed-satellite service space station called SPACEWAY 4 to be located in the 107.1° W.L. orbital location. The SPACEWAY 4 LOI is currently pending, but has not yet been accepted for filing.

Upon review of the SPACEWAY 4 LOI, Hughes discovered that three data points required under Section 25.114 of the Commission’s Rules to be included in the Schedule S portion of the FCC Form 312 submission had not been fully included with the LOI. By this letter, Hughes clarifies its SPACEWAY 4 LOI and supplies the inadvertently-omitted information.

First, with respect to the Antenna Beam tab of the Schedule S form (S7, Column (i)), the polarization alignment relative to the equatorial plane for beam “BCNV” was not included. As beam BCNV is a vertically-polarized beam, the entry for the polarization relative to the equatorial plane for this beam is 90 degrees, and the entry “90” should be inserted. The entry, as it should have appeared, is shown in highlighting on the first page of the Attachment to this letter.

Second, the entry for the number of carriers per transponder for the beacon carrier (Transponder ID BCN, Analog ID A4) was not included in the indicated location under the Emission tab of the Schedule S form (S13, Column (e)). The number of carriers that should be included in this row is one, and the entry “1” should be inserted. The entry, as

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it should have appeared, is shown in highlighting on the last row of Column (e) on the second page of the Attachment to this letter.

Third, the carrier spacing values for the four Transponder IDs (Digital IDs D4, D5, D6, and D7) with more than one carrier per transponder were inadvertently omitted from the Emission tab of the Schedule S form (S13, Column (f)). The following values should be included in Column (f) of item S13 for the affected carriers:

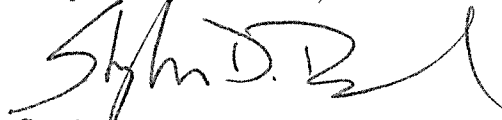
D4	3676 kHz
D5	1225 kHz
D6	612 kHz
D7	612 kHz

The entries, as they should have appeared, are shown in highlighting in Column (f) on the second page of the Attachment to this letter.

Hughes requests that the information in this letter be included with the above-referenced LOI for SPACEWAY 4. Should the Commission prefer, Hughes is prepared to amend the LOI to provide the information by way of a revision to the Schedule S portion of the FCC Form 312 submission itself.

Please direct any questions regarding this Clarification/Erratum to me.

Respectfully submitted,



Stephen D. Baruch

*Attorney for Hughes Network Systems, LLC*

cc (by e-mail): Robert Nelson  
Stephen Duall

Schedule 5 - Examples

File Edit View Window Help



Applicant | Satellite | Op. Band | GSO Orbit | NGSO Orbit | Service Area | Antenna Beam | Beam Diagram | Transponder | Modulation | Emission | Other |

37. Space Station Antenna Beam Characteristics

for each Antenna Beam provide:

a. Beam ID	b. T/R Mode	c. Peak Gain (dBi)	d. Edge Gain (dBi)	e. Pointing Error (Deg)	f. Rotational Error (Deg)	g. Min Cross-Polar Isolation (dB)	h. Polarization Switchable? (Y/N)	i. Polarization Alignment Rel. Equatorial Plane (Deg)	j. Service Area ID	k. Xmit Input Losses (dB)	l. Xmit Effective Output Power (W)	m. Xmit Max EIRP (dBW)	n. Rec System Noise Temp (K)	o. G/T at Max Gain Pt (dB/K)	p. Min Saturation Flux Density (dBW/m2)	q. Attenuator Max Value (dB)	r. Attenuator Step Size (dB)
U500R	T	53	49	0.05	0.05	30	N		SA1	4.5	25.1	67					
U500L	T	53	49	0.05	0.05	30	N		SA1	4.5	25.1	67					
U510R	T	53	49	0.05	0.05	30	N		SA1	4.5	25.1	67					
U510L	T	53	49	0.05	0.05	30	N		SA1	4.5	25.1	67					
U520R	T	53	49	0.05	0.05	30	N		SA1	4.5	25.1	67					
U520L	T	53	49	0.05	0.05	30	N		SA1	4.5	25.1	67					
U530R	T	53	49	0.05	0.05	30	N		SA1	4.5	25.1	67					
U530L	T	53	49	0.05	0.05	30	N		SA1	4.5	25.1	67					
U540R	T	53	49	0.05	0.05	30	N		SA1	4.5	25.1	67					
U540L	T	53	49	0.05	0.05	30	N		SA1	4.5	25.1	67					
U550R	T	53	49	0.05	0.05	30	N		SA1	4.5	25.1	67					
U550L	T	53	49	0.05	0.05	30	N		SA1	4.5	25.1	67					
U560R	T	53	49	0.05	0.05	30	N		SA1	4.5	25.1	67					
U560L	T	53	49	0.05	0.05	30	N		SA1	4.5	25.1	67					
U570R	T	53	49	0.05	0.05	30	N		SA1	4.5	25.1	67					
U570L	T	53	49	0.05	0.05	30	N		SA1	4.5	25.1	67					
U580R	T	53	49	0.05	0.05	30	N		SA1	4.5	25.1	67					
U580L	T	53	49	0.05	0.05	30	N		SA1	4.5	25.1	67					
U590R	T	53	49	0.05	0.05	30	N		SA1	4.5	25.1	67					
U590L	T	53	49	0.05	0.05	30	N		SA1	4.5	25.1	67					
U600R	T	53	49	0.05	0.05	30	N		SA1	4.5	25.1	67					
U600L	T	53	49	0.05	0.05	30	N		SA1	4.5	25.1	67					
TCL	R	53	51	0.05	0.05	30	N		SA1	4.5	25.1	67					
TMR	T	53	51	0.05	0.05	30	N		SA1	7	0.001	24	5642	15.5			
BCNV	T	26.9	23.9	0.05	0.05	30	N	90	SA1	2.4	2	30	8354	-35.2			
JMNUL	R	4	0	0.05	0.05	30	N		SA2	3	39.8	20	7893	14			
JMNDF	T	4	0	0.05	0.05	30	N		SA2				7893	14			
RFT1	R	53	51	0.05	0.05	30	N		SA1								
RFT2	R	53	51	0.05	0.05	30	N		SA1								

**ATTACHMENT**

Schedule 5 (Schedule 5)

File Edit View Window Help



Applicant | Satellite | Op. Band | GSO Orbit | NGSO Orbit | Service Area | Antenna Beam | Beam Diagram | Transponder | Modulation | Emission | Other

**3.13. TYPICAL EMISSIONS**  
for each planned type of emission provide:

a. Assoc. Transponder ID (Start)	b. Assoc. Transponder ID (End)	c. Digital Mod. ID	d. Analog Mod. ID	e. Carriers per Transponder	f. Carrier Spacing (kHz)	g. Noise Budget Reference	h. Dispersal Bandwidth (kHz)	i. Assoc. XMT Stn Max Antenna Gain (dBi)	j. Assoc. XMT Power (dBW)	k. Assoc. XMT Power (dBW)	l. Min. EIRP (dBW)	m. Max. EIRP (dBW)	n. Max. PFD (dBW/m <sup>2</sup> )	o. PFD Ref. BndWdth (4kHz or 1MHz)	p. Assoc. Stn Rec. G/T (dB/K)
FL01	FL170	D1		1		LB1.doc		58.9	11.1	27.1	63	67	-119	1MHz	18.6
FL01	FL170	D2		1		LB2.doc		58.9	11.1	27.1	63	67	-119	1MHz	18.6
FL01	FL170	D3		1		LB3.doc		58.9	11.1	27.1	63	67	-119	1MHz	18.6
RL01	RL330	D4		34	3676	B4.doc		45.6	-3	3	63	65	-122	1MHz	38
RL01	RL330	D5		102	1225	B5.doc		45.6	-3	3	63	65	-122	1MHz	38
RL01	RL330	D6		204	612	B6.doc		45.6	-3	0	63	65	-122	1MHz	38
RL01	RL330	D7		204	612	B7.doc		45.6	-3	0	63	65	-122	1MHz	38
TC1	TC2		A1	1		CMD1 LB.doc		64.5	-18.2	-1.2					
TC3	TC4		A1	1		CMD2 LB.doc		69.9	9.4	13.4					
TM1	TM2		A2	1		TLM1 LB.do					22	24	-131.8	1MHz	
TM3	TM4		A2	1		TLM2 LB.do					16	20	-142	1MHz	
RFT1	RFT2		A3	1		RFAT LB.do		65	-15	-13					
BCN	BCN		A4	1		BCN LB.doc					27	30	-132.4	1MHz	