## **SheppardMullin**

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August 7, 2019

#### VIA IBFS

Jose P. Albuquerque Chief, Satellite Division, International Bureau Federal Communications Commission 445 12<sup>th</sup> Street, SW Washington, DC 20554

#### Re: WorldVu Satellites Limited, Earth Station License Applications IBFS File Nos. SES-LIC-20180604-01082; SES-LIC-20180727-02075; SES-LIC-20180727-02076; SES-LIC-20190422-00538 Call Signs E180620; E181293; E181294; E190236

Dear Mr. Albuquerque:

WorldVu Satellites Limited ("OneWeb"), by counsel, hereby submits this letter reflecting revisions made to Comsearch coordination reports submitted in the above-captioned dockets, as requested by Commission staff. The attached Comsearch coordination reports for each earth station application make explicit reference to coordination under Section 25.136(a)(4) of the Commission's rules.

Additionally, Comsearch distributed the following notice to existing and proposed terrestrial operators in the 27.5 – 28.35 GHz band:

"Pursuant to Section 101.103(d)(2)(ix) of the Commission's Rules, you are notified that the coordination reports in the above-referenced applications are being amended to clarify that, in the frequency band 27.5 - 28.35 GHz, the applicant is seeking an authorization pursuant to Section 25.136(a)(4) of the Commission's Rules. No response is required."

Kindly contact the undersigned with any questions regarding this submission.

Very truly yours,

/s/ Brian D. Weimer

Brian D. Weimer for SHEPPARD, MULLIN, RICHTER & HAMPTON LLP

cc: Paul Blais, FCC

# Ka-Band Earth Station – Southbury, CT Frequency Coordination Report 28 GHz



Prepared on Behalf of WorldVu Satellites Limited

May 17, 2018





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#### 1. Summary of Results

On behalf of WorldVu Satellites Limited, Comsearch performed a coordination notice under Section 25.136(a)(4) of the FCC's rules for all existing and proposed terrestrial licenses within the coordination contours of their proposed Ka-Band earth station in Southbury, CT, which will transmit at 28 GHz<sup>1</sup>. Prior-notification letters were sent to the licensees and a copy of the notification data is provided in section four of this report. The earth station coordination was finalized on May 15, 2018.

No objections were received from any of the incumbent 28 GHz licensees.

#### **2.** 28 GHz Common Carrier and LTTS Coordination

In accordance with FCC Rules and Regulations, the Ka-Band earth station in Southbury, CT was prior-coordinated by Comsearch. A notification letter and datasheets for this earth station were sent to the following 28 GHz common carrier fixed microwave licensees. These licensees are authorized to operate temporary fixed operations from 27.5 – 29.5 GHz on a nationwide basis or local basis.

Licensee	Authorized Geographic Area
Frontier Southwest Incorporated	Nationwide
Verizon New Jersey Inc.	New Jersey

A notification letter and datasheets for the Ka-Band earth station in Southbury, CT were also sent to the following 28 GHz local television transmission licensee. This licensee is authorized to operate temporary fixed operations from 27.5 – 29.5 GHz on a nationwide basis.

Licensee	Authorized Geographic Area
Information Super Station, LLC	Nationwide

No objections were received from the common carrier or local television transmission service incumbents.

<sup>&</sup>lt;sup>1</sup> The proposed earth station will operate in the 27.5 – 29.1, 29.5 – 30.0 GHz portion of the Ka-Band.



#### **3.** 28 GHz LMDS Coordination

A Notification letter was sent to the following 28 GHz LMDS licensees. The proposed earth station will operate on frequencies that overlap Block A of the LMDS service. The total frequency allocation for Block A of the LMDS spectrum appears below.

Block A: 27.500-28.350 GHz 29.100-29.250 GHz 31.075-31.225 GHz

Licensee	Market	Market Name
McKay Brothers	BTA321	New York, NY
NuVisions	BTA321	New York, NY
T-Mobile	BTA184	Hartford, CT
T-Mobile	BTA318	New Haven-Waterbury-Meriden, CT
T-Mobile	BTA321	New York, NY
T-Mobile	BTA427	Springfield-Holyoke, MA
Verizon	BTA007	Albany-Schenectady, NY
Verizon	BTA184	Hartford, CT
Verizon	BTA318	New Haven-Waterbury-Meriden, CT
Verizon	BTA321	New York, NY
Verizon	BTA427	Springfield-Holyoke, MA
Windstream	BTA321	New York, NY
Xchange Telecom Corp	BTA321	New York, NY



## 4. Earth Station Coordination Data

This section presents the data pertinent to the proposed Ka-Band earth station in Southbury, CT. This data was circulated to all incumbent licensees in the shared 28 GHz frequency ranges.



Date:	04/0	06/2018				
Job Number:	180	80406COMSGE03				
Administrative Information	n					
Status	ENG	GINEER PROPOSAL				
Licensee Name	Wo	rldVu Satellites Limited				
Site Information	SO	UTHBURY, CT				
Venue Name						
Latitude (NAD 83)	41°	27' 6.4" N				
Longitude (NAD 83)	73°	17' 21.6" W				
Climate Zone	A					
Rain Zone	2					
Ground Elevation (AMSL)	38.9	99 m / 127.9 ft				
Link Information		51 B. LEW				
Satellite Type	Low	Earth Orbit				
Mode	TR	- Transmit-Receive				
Modulation	Dig	ital				
Minimum Elevation Angle	5.0	• ALC				
		' to 360°				
Antenna Centerline (AGL)	2.44	4 m / 8.0 ft				
Antenna Information		Receive -		Transmit -		
Manufacturer		CPI		CPI		
Model		3.5 meter		3.5 meter		
Gain / Diameter		54.6 dBi / 3.5 m		58.0 dBi / 3.5 m		
3-dB / 15- <mark>dB Beamwidth</mark>		0.32° / 0.36°		0.21° / <mark>0.23°</mark>		
Max Available RF Power	(dBW/4 kHz)			-39.6		
	(dBW/MHz)			-15.6		
Maximum EIRP	(dBW/4 kHz)			18.4		
	(dBW/MHz)			42.4		
Interference Objectives:	Long Term	-152.4 dBW/MHz	20%	-151.0 dBW/4 kHz	20%	
8094694999999999999999999999999999999999	Short Term	-142.4 dBW/MHz	0.01%	-128.0 dBW/4 kHz	0.0025%	
Frequency Information		Receive 18.0 GHz		Transmit 28.0 GHz	and a	
Emission / Frequency Range (MHz)		2M16G7D - 18M0G7D / 17800.0 - 18600.0 2M16G7D - 18M0G7D / 18800.0 - 19300.0		230MG7D / 27500.0 - 29100 230MG7D / 29500.0 - 30000		
Max Great Circle Coordination Dis	stance	129.0 km / 80.1 mi		100.0 km / 62.1 mi		
Precipitation Scatter Contour Rad	ius	100.0 km / 62.1 mi		100.0 km / 62.1 mi		



Latitude (NAD 8: Longitude (NAD Ground Elevation Antenna Model Interference Obje	IAD 83) vation (AMSL) del Objectives: Long Term	41° 27' 6.4" N 73° 17' 21.6" W 38.99 m / 127.9 ft/Antenna Ce CPI 3.5 meter -152.4 dBW/MHz	20%	2.44 m / 8.0 ft -151.0 dBW/4 kHz		
May Available E	Short Term	-142.4 dBW/MHz	0.01%	-128.0 dBW/4 kHz	0.0025%	
Max Available R	(F Power		-39.6 (dBV	18.0 GHz	Transmit	28.0.047
	Horizon	Antenna	Horizon	Coordination	Horizon	Coordination
Azimuth (°)	Elevation (°)	Discrimination (°)	Gain (dBi)	Distance (km)	Gain (dBi)	Distance (km
0	0.00	101.22	11.53	129.00	12.20	100.00
5	0.00	96.23	11.53	129.00	12.20	100.00
10	0.00	91.24	11.53	129.00	12.20	100.00
15	0.00	86.25	11.53	129.00	12.20	100.00
20	0.00	81.26	11.53	129.00	12.20	100.00
25	0.00	76.27	11.53	129.00	12.20	100.00
30	0.00	71.28	11.53	129.00	12.20	100.00
35	0.00	66.30	11.53	129.00	12.20	100.00
40	0.00	61.31	11.53	129.00	12.20	100.00
45	0.00	56.33	11.53	129.00	12.20	100.00
50	0.00	51.34	11.53	129.00	12.20	100.00
55	0.00	46.36	11.53	129.00	12.20	100.00
60	0.00	41.38	11.53	129.00	12.20	100.00
65	0.00	36.41	11.53	129.00	12.20	100.00
70	0.00	31.45	11.53	129.00	12.20	100.00
75	0.00	26.49	11.53	129.00	12.20	100.00
80	0.00	21.56	11.53	129.00	12.20	100.00
85	0.00	16.66	11.53	129.00	12.20	100.00
90	0.00	11.85	11.53	129.00	12.20	100.00
95	0.00	7.29	11.53	129.00	12.20	100.00
100	0.00	3.97	11.53	129.00	12.20	100.00
05	0.00	5.32	11.53	129.00	12.20	100.00
10	0.00	9.53	11.53	129.00	12.20	100.00
15	0.00	14.25	11.53	129.00	12.20	100.00
20	0.00	19.12	11.53	129.00	12.20	100.00
25	0.00	24.04	11.53	129.00	12.20	100.00
130	0.00	28.98	11.53	129.00	12.20	100.00
35	0.00	33.94	11.53	129.00	12.20	100.00
40	0.00	38.91	11.53	129.00	12.20	100.00
45	0.00	43.89	11.53	129.00	12.20	100.00
50	0.00	48.87	11.53	129.00	12.20	100.00
55	0.00	53.85	11.53	129.00	12.20	100.00
60	0.00	58.83	11.53	129.00	12.20	100.00
165	0.00	63.82	11.53	129.00	12.20	100.00
170	0.00	68.81	11.53	129.00	12.20	100.00
175	0.00	73.79	11.53	129.00	12.20	100.00
180	0.00	78.78	11.53	129.00	12.20	100.00
185	0.00	83.77	11.53	129.00	12.20	100.00



Coordination V	Values SOUTHBURY, CT					
Licensee Name		WorldVu Satellites Limited				
Latitude (NAD 8	83)	41° 27' 6.4" N				
Longitude (NAD		73° 17' 21.6" W				
Ground Elevation			38.99 m / 127.9 ft/Antenna Centerline (AGL)			
Antenna Model		CPI 3.5 meter		2.44 m / 8.0 ft		
Antenna Mode		Receive 18.0 GHz		Transmit 28.0 GHz		
	pjectives: Long Term	-152.4 dBW/MHz 20% -142.4 dBW/MHz 0.01%		-151.0 dBW/4 kHz	20%	
Interference OL	Short Term			-128.0 dBW/4 kHz		
Max Available					0.002370	
max Available	iti i owei	-39.6 (dBW/4 kHz) Receive 18.0 GHz			Transmit	28.0 GHz
	Horizon	Antenna	Horizon	Coordination	Horizon	Coordination
Azimuth (°)	Elevation (°)	Discrimination (°)	Gain (dBi)	Distance (km)	Gain (dBi)	Distance (km)
190	0.00	88.76	11.53	129.00	12.20	100.00
195	0.00	93.75	11.53	129.00	12.20	100.00
200	0.00	98.74	11.53	129.00	12.20	100.00
205						
	0.00	103.73	11.53	129.00	12.20	100.00
210	0.00	108.72	11.53	129.00	12.20	100.00
215	0.00	113.70	11.53	129.00	12.20	100.00
220	0.00	118.69	11.53	129.00	12.20	100.00
225	0.00	123.67	11.53	129.00	12.20	100.00
230	0.00	128.66	11.53	129.00	12.20	100.00
235	0.00	133.64	11.53	129.00	12.20	100.00
240	0.00	138.62	11.53	129.00	12.20	100.00
245	0.00	143.59	11.53	129.00	12.20	100.00
250	0.00	148.55	11.53	129.00	12.20	100.00
255	0.00	153.51	11.53	129.00	12.20	100.00
260	0.00	158.44	11.53	129.00	12.20	100.00
265	0.00	163.34	11.53	129.00	12.20	100.00
270	0.00	168.15	11.53	129.00	12.20	100.00
275	0.00	172.71	11.53	129.00	12.20	100.00
280	0.00	176.03	11.53	129.00	12.20	100.00
285	0.00	174.68	11.53	129.00	12.20	100.00
205	0.00	170.47	11.53	129.00	12.20	100.00
295			11.53	129.00	12.20	
	0.00	165.75				100.00
300	0.00	160.88	11.53	129.00	12.20	100.00
305	0.00	155.96	11.53	129.00	12.20	100.00
310	0.00	151.02	11.53	129.00	12.20	100.00
315	0.00	146.06	11.53	129.00	12.20	100.00
320	0.00	141.09	11.53	129.00	12.20	100.00
325	0.00	136.11	11.53	129.00	12.20	100.00
330	0.00	131.13	11.53	129.00	12.20	100.00
335	0.00	126.15	11.53	129.00	12.20	100.00
340	0.00	121.17	11.53	129.00	12.20	100.00
345	0.00	116.18	11.53	129.00	12.20	100.00
350	0.00	111.19	11.53	129.00	12.20	100.00
355	0.00	106.21	11.53	129.00	12.20	100.00
333	0.00	100.21	11.00	123.00	12.20	100.00



## **5.** Contact Information

For questions or information regarding the 28 GHz Frequency Coordination Report, please contact:

Contact person:	Dennis Jimeno
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