



August 26, 2015

VIA IBFS

Marlene H. Dortch, Secretary
Federal Communications Commission
445 Twelfth Street, SW
Washington, DC 20554

Re: Supplement to HNS License Sub, LLC Application – SES-AMD-20150812-00519

Dear Ms. Dortch:

HNS License Sub, LLC supplements its application, IBFS File No. SES-AMD-20150812-00519,¹ to provide the enclosed evidence of the completion of the required frequency coordination for the proposed Earth station in Bellevue, NE pursuant to FCC rule 25.203(c).² Comsearch completed frequency coordination of this Earth station with the licensees provided in the enclosed report on August 24, 2015 and received no objections to the proposed operations.

Please contact the undersigned with any questions.

Sincerely,

/s/ Jesse Jachman

Jesse Jachman
Senior Counsel, Regulatory Affairs
HNS License Sub, LLC
11717 Exploration Lane
Germantown, MD 20876
(301)428-5975

Enclosures:

¹ See IBFS File No. SES-AMD-20150812-00519 (filed Aug. 12, 2015).

² 47 C.F.R. § 25.203(c). As Hughes stated in the narrative to this application, Hughes would provide evidence of frequency coordination upon completion. See IBFS File No. SES-AMD-20150812-00519, Narrative at 1 (filed Aug. 12, 2015).

Ka-Band Earth Station – Bellevue, NE

Frequency Coordination Report

28 GHz



Prepared on Behalf of
Hughes Network
Systems Limited

August 24, 2015



COMSEARCH
A CommScope Company

Table of Contents

1. Summary of Results	- 1 -
2. 28 GHz Common Carrier and LTTS Coordination	- 1 -
3. 28 GHz LMDS Coordination	- 2 -
4. Earth Station Coordination Data	- 3 -
5. Contact Information	- 7 -

1. Summary of Results

On behalf of Hughes Network Systems, Comsearch performed a coordination notice for all existing and proposed terrestrial licenses within the coordination contours of their proposed Ka-Band earth station in Bellevue, Nebraska, which will transmit at 28 GHz¹. 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 August 24, 2015.

No objections were received from any of the incumbent 28 GHz licensees. Our notification to the LMDS incumbents was performed under the assumption that the earth station would be operating on a secondary basis to LMDS Block A operations and a contact at Hughes Network Systems has been provided in case any concerns may arise in the future.

2. 28 GHz Common Carrier and LTTTS Coordination

In accordance with FCC Rules and Regulations, the Ka-Band earth station in Bellevue, Nebraska was prior-coordinated by Comsearch. A notification letter and datasheet for this earth station were sent to the following 28 GHz common carrier fixed microwave licensee on July 22, 2015. This licensee is authorized to operate temporary fixed operations from 27.5 – 29.5 GHz on a nationwide basis.

Licensee	Authorized Geographic Area
Verizon	Continental US

A notification letter and datasheet for the Ka-Band earth station in Bellevue, Nebraska were also sent to the following 28 GHz local television transmission licensee on July 22, 2015. 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	Continental US

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

¹ The proposed earth station will operate in the 27.5 – 28.35 GHz portion of the Ka-Band.

3. 28 GHz LMDS Coordination

A Notification letter was sent to the following 28 GHz LMDS licensees on July 22, 2015. 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
Nextlink/XO	BTA111	Des Moines, IA
Nextlink/XO	BTA332 ²	Omaha, NE
Venture Wireless	BTA421	Sioux City, IA

No objections were received from the LMDS incumbents.

² The proposed earth station will be located inside BTA332.



4. Earth Station Coordination Data

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

COMSEARCH**Earth Station Data Sheet**

19700 Janelia Farm Boulevard, Ashburn, VA 20147
 (703)726-5662 <http://www.comsearch.com>

Date: 07/21/2015
 Job Number: <PCNJobCode>

Administrative Information

Status ENGINEER PROPOSAL
 Call Sign <PCNCallSign>
 Licensee Code HUNESY
 Licensee Name HUGHES NETWORK SYSTEMS LIMITED

Site Information BELLEVUE, NE

Venue Name
 Latitude (NAD 83) 41° 10' 40.1" N
 Longitude (NAD 83) 95° 55' 25.7" W
 Climate Zone A
 Rain Zone 2
 Ground Elevation (AMSL) 323.98 m / 1062.9 ft

Link Information

Satellite Type Geostationary
 Mode TO - Transmit-Only
 Modulation Digital
 Satellite Arc 97° W to 97° West Longitude
 Azimuth Range 181.6° to 181.6°
 Corresponding Elevation Angles 42.4° / 42.4°
 Antenna Centerline (AGL) 5.49 m / 18.0 ft

Antenna Information Transmit - FCC32

Manufacturer General Dynamics
 Model 13.2 Meter
 Gain / Diameter 68.8 dBi / 13.2 m
 3-dB / 15-dB Beamwidth 0.07° / 0.15°

Max Available RF Power (dBW/4 kHz) -38.0
 (dBW/MHz) -14.0

Maximum EIRP (dBW/4 kHz) 30.8
 (dBW/MHz) 54.8

Interference Objectives: Long Term -151.0 dBW/4 kHz 20%
 Short Term -128.0 dBW/4 kHz 0.0025%

Frequency Information Transmit 28.0 GHz

Emission / Frequency Range (MHz) 250MG7D / 27500.0 - 28350.0

Max Great Circle Coordination Distance 100.0 km / 62.1 mi
 Precipitation Scatter Contour Radius 100.0 km / 62.1 mi

COMSEARCH**Earth Station Data Sheet**

19700 Janelia Farm Boulevard, Ashburn, VA 20147
 (703)726-5662 <http://www.comsearch.com>

Coordination Values	BELLEVUE, NE
Licensee Name	HUGHES NETWORK SYSTEMS LIMITED
Latitude (NAD 83)	41° 10' 40.1" N
Longitude (NAD 83)	95° 55' 25.7" W
Ground Elevation (AMSL)	323.98 m / 1062.9 ft
Antenna Centerline (AGL)	5.49 m / 18.0 ft
Antenna Model	General Dynamics 13.2 meter
Antenna Mode	Transmit 28.0 GHz
Interference Objectives: Long Term	-151.0 dBW/4 kHz 20%
Short Term	-128.0 dBW/4 kHz 0.0025%
Max Available RF Power	-38.0 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Transmit 28.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
0	1.03	138.61	-10.00	100.00
5	1.30	138.79	-10.00	100.00
10	1.91	138.80	-10.00	100.00
15	1.94	137.75	-10.00	100.00
20	2.11	136.38	-10.00	100.00
25	2.17	134.50	-10.00	100.00
30	2.45	132.42	-10.00	100.00
35	2.59	129.91	-10.00	100.00
40	3.43	127.56	-10.00	100.00
45	4.01	124.73	-10.00	100.00
50	4.59	121.66	-10.00	100.00
55	5.30	118.42	-10.00	100.00
60	5.77	114.89	-10.00	100.00
65	6.15	111.19	-10.00	100.00
70	5.58	107.16	-10.00	100.00
75	5.48	103.23	-10.00	100.00
80	5.01	99.22	-10.00	100.00
85	4.61	95.24	-10.00	100.00
90	4.22	91.28	-10.00	100.00
95	4.15	87.35	-10.00	100.00
100	4.31	83.42	-10.00	100.00
105	4.22	79.53	-10.00	100.00
110	4.05	75.69	-10.00	100.00
115	3.82	71.94	-10.00	100.00
120	3.70	68.23	-10.00	100.00
125	3.43	64.68	-10.00	100.00
130	3.13	61.28	-10.00	100.00
135	2.71	58.10	-10.00	100.00
140	2.76	54.86	-10.00	100.00
145	2.43	52.05	-10.00	100.00
150	2.70	49.08	-10.00	100.00
155	2.12	47.00	-9.80	100.00
160	1.87	45.05	-9.34	100.00
165	1.50	43.59	-8.99	100.00
170	0.92	42.79	-8.78	100.00
175	0.58	42.25	-8.64	100.00
180	0.38	42.04	-8.59	100.00
185	0.21	42.30	-8.66	100.00

COMSEARCH**Earth Station Data Sheet**

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5662 <http://www.comsearch.com>

Coordination Values	BELLEVUE, NE
Licensee Name	HUGHES NETWORK SYSTEMS LIMITED
Latitude (NAD 83)	41° 10' 40.1" N
Longitude (NAD 83)	95° 55' 25.7" W
Ground Elevation (AMSL)	323.98 m / 1062.9 ft
Antenna Centerline (AGL)	5.49 m / 18.0 ft
Antenna Model	General Dynamics 13.2 meter
Antenna Mode	Transmit 28.0 GHz
Interference Objectives: Long Term	-151.0 dBW/4 kHz 20%
Short Term	-128.0 dBW/4 kHz 0.0025%
Max Available RF Power	-38.0 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Transmit 28.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
190	0.00	43.06	-8.85	100.00
195	0.00	44.07	-9.10	100.00
200	0.29	45.25	-9.39	100.00
205	0.48	46.92	-9.78	100.00
210	0.61	49.00	-10.00	100.00
215	0.48	51.58	-10.00	100.00
220	0.68	54.18	-10.00	100.00
225	0.76	57.10	-10.00	100.00
230	0.78	60.22	-10.00	100.00
235	1.07	63.38	-10.00	100.00
240	1.19	66.76	-10.00	100.00
245	1.48	70.20	-10.00	100.00
250	1.41	73.84	-10.00	100.00
255	1.46	77.51	-10.00	100.00
260	1.24	81.27	-10.00	100.00
265	1.31	85.01	-10.00	100.00
270	1.14	88.77	-10.00	100.00
275	1.00	92.53	-10.00	100.00
280	1.02	96.27	-10.00	100.00
285	1.05	99.99	-10.00	100.00
290	1.14	103.70	-10.00	100.00
295	0.84	107.27	-10.00	100.00
300	0.86	110.83	-10.00	100.00
305	0.86	114.31	-10.00	100.00
310	0.91	117.71	-10.00	100.00
315	0.62	120.80	-10.00	100.00
320	0.41	123.75	-10.00	100.00
325	0.66	126.78	-10.00	100.00
330	1.64	130.16	-10.00	100.00
335	2.47	133.27	-10.00	100.00
340	2.63	135.60	-10.00	100.00
345	2.20	137.04	-10.00	100.00
350	1.82	138.07	-10.00	100.00
355	1.35	138.51	-10.00	100.00



5. Contact Information

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

Contact person:	Joanna Lynch
Title:	Manager, Spectrum & Data Solutions
Company:	Comsearch
Address:	19700 Janelia Farm Blvd., Ashburn, VA 20147
Telephone:	703-726-5711
Fax:	703-726-5599
Email:	jlynch@comsearch.com
Web site:	www.comsearch.com