Ka-Band Earth Station – Honolulu, HI

Frequency Coordination Report

28 GHz

Prepared on Behalf of
SES Americom

November 9, 2018

COMSEARCH®
A CommScope Company

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1. Summary of Results

On behalf of SES Americom, Comsearch performed a coordination notice for all existing and proposed terrestrial licenses within the coordination contours of their proposed Ka-Band earth station in Honolulu, HI, which will transmit at 28 GHz[1] for a short temporary period of November 10 – December 9, 2018. 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 November 9, 2018.

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

2. 28 GHz Common Carrier and LTTS Coordination

In accordance with FCC Rules and Regulations, the Ka-Band earth station in Honolulu, HI 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 licensee s. This licensee is authorized to operate temporary fixed operations from 27.5 – 29.5 GHz on a nationwide basis.

Licensee	Authorized Geographic Area
Frontier Southwest Incorporated	Continental US

A notification letter and datasheets for the Ka-Band earth station in Honolulu, HI 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	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

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

There were no LMDS licensees identified in Hawaii, therefore no objections were received from the LMDS incumbents.

4. Earth Station Coordination Data

This section presents the data pertinent to the proposed Ka-Band earth station in Honolulu, HI. 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:	10/11/2018
Job Number:	181025COMSDJ01

Administrative Information	
Status	ENGINEER PROPOSAL
Call Sign	
Licensee Code	P3210
Licensee Name	SES Americom, Inc.

Site Information	**Honolulu, HI**
Venue Name	
Latitude (NAD 83)	21° 16' 48.0" N
Longitude (NAD 83)	157° 49' 48.0" W
Climate Zone	B
Rain Zone	4
Ground Elevation (AMSL)	1.0 m / 3.28 ft

Link Information	
Satellite Type	Medium Earth Orbit
Mode	TO - Transmit-Only
Modulation	Digital
Minimum Elevation Angle	14.5°
Azimuth Range	0.0° to 360°
Antenna Centerline (AGL)	2.74 m / 9.0 ft

Antenna Information		**Transmit - FCC32**
Manufacturer		AVL
Model		0.85 meter
Gain / Diameter		46.0 dBi / 0.85 m
3-dB / 15-dB Beamwidth		0.90° / 2.10°
Max Available RF Power	(dBW/4 kHz)	-23.61
	(dBW/MHz)	0.39
Maximum EIRP	(dBW/4 kHz)	22.39
	(dBW/MHz)	46.39
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)	216MG7D / 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

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Coordination Values	**Honolulu, HI**
Licensee Name	SES Americom.
Latitude (NAD 83)	21° 16' 48.0" N
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Ground Elevation (AMSL)	1.0 m / 3.28 ft
Antenna Centerline (AGL)	2.74 m / 9.0 ft
Antenna Model	AVL 0.85 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	-23.61 (dBW/4 kHz)

Transmit 28.0 GHz

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Horizon Gain (dBi)	Coordination Distance (km)
0	0.00	72.66	-10.00	100.00
5	0.00	70.98	-10.00	100.00
10	0.00	69.44	-10.00	100.00
15	0.00	68.05	-10.00	100.00
20	0.00	66.82	-10.00	100.00
25	0.00	65.77	-10.00	100.00
30	0.00	64.90	-10.00	100.00
35	0.00	64.24	-10.00	100.00
40	0.00	63.78	-10.00	100.00
45	0.00	63.54	-10.00	100.00
50	0.00	63.52	-10.00	100.00
55	0.00	63.71	-9.40	100.00
60	0.00	64.11	-8.16	100.00
65	0.00	64.73	-6.77	100.00
70	0.00	65.55	-5.23	100.00
75	0.00	66.55	-3.42	100.00
80	0.00	67.74	-1.39	100.00
85	0.00	69.10	1.07	100.00
90	0.00	70.61	3.43	100.00
95	0.00	72.25	5.61	100.00
100	0.00	74.02	6.55	100.00
105	0.00	75.90	4.99	100.00
110	0.00	77.87	2.17	100.00
115	0.00	79.92	-0.09	100.00
120	0.00	82.04	-2.37	100.00
125	0.00	84.20	-4.30	100.00
130	0.00	86.40	-5.95	100.00
135	0.00	88.62	-7.39	100.00
140	0.00	90.85	-8.61	100.00
145	0.00	93.08	-9.64	100.00
150	0.00	95.28	-10.00	100.00
155	0.00	97.46	-10.00	100.00
160	0.00	99.59	-10.00	100.00
165	0.00	101.65	-10.00	100.00
170	0.00	103.64	-10.00	100.00
175	0.00	105.54	-10.00	100.00
180	0.00	107.34	-10.00	100.00
185	0.00	109.02	-10.00	100.00

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Antenna Centerline (AGL)	2.74 m / 9.0 ft
Antenna Model	AVL 0.85 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	-23.61 (dBW/4 kHz)

		Transmit 28.0 GHz		
Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Horizon Gain (dBi)	Coordination Distance (km)
190	0.00	110.56	-10.00	100.00
195	0.00	111.95	-10.00	100.00
200	0.00	113.18	-10.00	100.00
205	0.00	114.23	-10.00	100.00
210	0.00	115.10	-10.00	100.00
215	0.00	115.76	-9.64	100.00
220	0.00	116.22	-8.62	100.00
225	0.00	116.46	-7.45	100.00
230	0.00	116.48	-6.11	100.00
235	0.00	116.29	-4.59	100.00
240	0.00	115.89	-2.92	100.00
245	0.00	115.27	-1.13	100.00
250	0.00	114.45	0.67	100.00
255	0.00	113.45	2.17	100.00
260	0.00	112.26	2.84	100.00
265	0.00	110.90	2.34	100.00
270	0.00	109.39	0.94	100.00
275	0.00	107.75	-0.84	100.00
280	0.00	105.98	-2.65	100.00
285	0.00	104.10	-4.34	100.00
290	0.00	102.13	-5.88	100.00
295	0.00	100.08	-7.25	100.00
300	0.00	97.96	-8.51	100.00
305	0.00	95.80	-9.65	100.00
310	0.00	93.60	-10.00	100.00
315	0.00	91.38	-10.00	100.00
320	0.00	89.15	-10.00	100.00
325	0.00	86.92	-10.00	100.00
330	0.00	84.72	-10.00	100.00
335	0.00	82.54	-10.00	100.00
340	0.00	80.41	-10.00	100.00
345	0.00	78.35	-10.00	100.00
350	0.00	76.36	-10.00	100.00
355	0.00	74.46	-10.00	100.00

5. Contact Information

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

Contact person:	Dennis Jimeno
Title:	Engineer III, Telecommunications
Company:	Comsearch
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