

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
Intelsat License LLC
NUEVO, CA
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
December 06, 2019

TABLE OF CONTENTS

1. CONCLUSIONS	3
2. SUMMARY OF RESULTS	4
3. SUPPLEMENTAL SHOWING	5
4. EARTH STATION COORDINATION DATA.....	6
5. CERTIFICATION.....	10

1. CONCLUSIONS

An interference study considering all existing, proposed and prior coordinated microwave facilities within the coordination contours of the proposed earth station demonstrates that this site will operate satisfactorily with the common carrier microwave environment. Further, there will be no restrictions of its operation due to interference considerations.

2. SUMMARY OF RESULTS

A number of great circle interference cases were identified during the interference study of the proposed earth station. Each of the cases, which exceeded the interference objective on a line-of-sight basis, was profiled and the propagation losses estimated using NBS TN101 (Revised) techniques. The losses were found to be sufficient to reduce the signal levels to acceptable magnitudes in every case.

3. SUPPLEMENTAL SHOWING

Pursuant to Part 25.203(c) of the FCC Rules and Regulations, the satellite earth station proposed in this application was coordinated by Comsearch using computer techniques and in accordance with Part 25 of the FCC Rules and Regulations.

Coordination data for this earth station was sent to the below listed carriers with a letter dated 11/20/2019.

Company

ABC Holding Company Inc.
CBS Broadcasting Inc
CCO SoCal I, LLC
Ellis Communications KDOC Licensee, LLC
Entravision Holdings, LLC
Fixed Wireless Holdings, LLC
Fox Television Stations, LLC
Fox Television Stations, LLC (KTTV)
Ion Media License Company, LLC
KFMB-TV, LLC
KFTV License Partnership GP
KMEX License Partnership GP
KRCA License LLC
KTLA, LLC
KVMD Licensee Co., LLC
Los Angeles City Info Technology Agency
Los Angeles Television Station Kcal LLC
Los Angeles Unified School District
Mediacom California LLC
NBC Telemundo License LLC
Nrj TV La License Co, LLC
Public Media Group of Southern Californi
Regents of the University of California
San Bernardino Community College KVCR-FM
SBE Coordinator
Scripps Media, Inc. - KGTV
Station Venture Operations, LP
Trinity Christian Center of Santa Ana

4. EARTH STATION COORDINATION DATA

This section presents the data pertinent to frequency coordination of the proposed earth station that was circulated to all carriers within its coordination contours.

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

Date: 12/06/2019
Job Number: 191120COMSGE04

Administrative Information

Status ENGINEER PROPOSAL
Call Sign E060384
Licensee Code INTELS
Licensee Name Intelsat License LLC

Site Information

NUEVO, CA
Venue Name
Latitude (NAD 83) 33° 47' 47.3" N
Longitude (NAD 83) 117° 5' 15.0" W
Climate Zone A
Rain Zone 4
Ground Elevation (AMSL) 556.0 m / 1824.2 ft

Link Information

Satellite Type Geostationary
Mode RO - Receive-Only
Modulation Digital
Satellite Arc 50° W to 186° West Longitude
Azimuth Range 103.2° to 257.9°
Corresponding Elevation Angles 10.3° / 8.8°
Antenna Centerline (AGL) 6.1 m / 20.0 ft

Antenna Information

Receive - FCC32
Manufacturer Vertex
Model 9 Meter
Gain / Diameter 58.5 dBi / 9.0 m
3-dB / 15-dB Beamwidth 0.18° / 0.38°

Interference Objectives: Long Term -156.0 dBW/MHz 20%
Short Term -146.0 dBW/MHz 0.01%

Frequency Information

Receive 13.0 GHz
Emission / Frequency Range (MHz) 440KG2D / 12749.75
56K0G7W - 72M0G7W / 12200.0 - 12750.0

Max Great Circle Coordination Distance 367.8 km / 228.5 mi
Precipitation Scatter Contour Radius 385.2 km / 239.3 mi

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

Coordination Values

NUEVO, CA

Licensee Name Intelsat License LLC
Latitude (NAD 83) 33° 47' 47.3" N
Longitude (NAD 83) 117° 5' 15.0" W
Ground Elevation (AMSL) 556.0 m / 1824.2 ft
Antenna Centerline (AGL) 6.1 m / 20.0 ft
Antenna Model Vertex 9 meter
Antenna Mode Receive 13.0 GHz
Interference Objectives: Long Term -156.0 dBW/MHz 20%
Short Term -146.0 dBW/MHz 0.01%

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 13.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
0	2.29	102.03	-10.00	134.42
5	2.53	98.16	-10.00	130.82
10	3.06	93.21	-10.00	121.20
15	3.35	88.25	-10.00	115.99
20	3.30	83.28	-10.00	116.96
25	3.05	78.33	-10.00	121.29
30	3.78	73.35	-10.00	108.89
35	3.72	68.38	-10.00	109.81
40	3.66	63.43	-10.00	110.82
45	3.67	58.47	-10.00	110.65
50	3.33	53.55	-10.00	116.36
55	3.00	48.65	-10.00	122.26
60	2.94	43.73	-9.02	126.69
65	3.68	38.72	-7.70	118.57
70	3.75	33.80	-6.22	122.89
75	3.41	29.00	-4.56	134.12
80	3.98	24.04	-2.52	132.34
85	3.98	19.27	-0.12	142.69
90	3.99	14.64	2.86	156.82
95	3.21	10.86	6.10	192.34
100	3.08	7.92	9.53	209.86
105	3.28	7.26	10.48	210.86
110	4.10	9.18	7.93	183.67
115	4.21	13.05	4.11	159.54
120	4.19	16.97	1.25	145.60
125	4.32	20.71	-0.91	134.24
130	4.14	24.55	-2.75	130.10
135	4.66	27.78	-4.09	118.04
140	4.05	31.60	-5.49	120.71
145	4.39	34.55	-6.46	112.73
150	4.15	37.66	-7.40	112.43
155	2.96	41.22	-8.38	128.79
160	2.63	43.77	-9.03	131.33
165	2.81	45.47	-9.44	127.54
170	3.44	46.21	-9.62	115.83
175	4.83	45.63	-9.48	100.00
180	5.22	45.49	-9.45	100.00
185	5.64	44.82	-9.29	100.00

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

Coordination Values

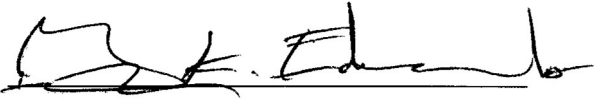
NUEVO, CA

Licensee Name Intelsat License LLC
Latitude (NAD 83) 33° 47' 47.3" N
Longitude (NAD 83) 117° 5' 15.0" W
Ground Elevation (AMSL) 556.0 m / 1824.2 ft
Antenna Centerline (AGL) 6.1 m / 20.0 ft
Antenna Model Vertex 9 meter
Antenna Mode Receive 13.0 GHz
Interference Objectives: Long Term -156.0 dBW/MHz 20%
Short Term -146.0 dBW/MHz 0.01%

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 13.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
190	5.96	43.79	-9.03	100.00
195	6.43	42.15	-8.62	100.00
200	6.52	40.42	-8.17	100.00
205	6.08	38.69	-7.69	100.00
210	5.47	36.64	-7.10	100.00
215	5.92	33.43	-6.10	100.00
220	5.98	30.24	-5.02	101.57
225	6.55	26.49	-3.58	101.01
230	5.57	23.62	-2.33	115.19
235	5.58	19.91	-0.48	122.30
240	5.48	16.18	1.78	131.08
245	5.61	12.20	4.84	143.17
250	4.99	8.61	8.62	172.82
255	4.72	5.00	14.53	207.38
260	4.54	4.75	15.08	367.76
265	4.62	8.24	9.10	181.45
270	4.43	12.86	4.27	156.57
275	4.08	17.73	0.78	145.14
280	3.01	22.82	-1.96	154.28
285	1.89	27.91	-4.14	172.36
290	1.33	32.88	-5.92	180.56
295	0.69	37.86	-7.45	198.93
300	0.00	42.85	-8.80	228.36
305	0.00	47.73	-9.97	223.32
310	0.21	52.61	-10.00	222.07
315	0.00	57.54	-10.00	223.20
320	0.00	62.47	-10.00	223.20
325	0.00	67.39	-10.00	223.20
330	0.00	72.33	-10.00	223.20
335	0.00	77.26	-10.00	223.20
340	0.00	82.20	-10.00	223.20
345	0.00	87.14	-10.00	223.20
350	0.28	92.09	-10.00	215.67
355	1.32	97.05	-10.00	160.00

5. CERTIFICATION

I HEREBY CERTIFY THAT I AM THE TECHNICALLY QUALIFIED PERSON RESPONSIBLE FOR THE PREPARATION OF THE FREQUENCY COORDINATION DATA CONTAINED IN THIS APPLICATION, THAT I AM FAMILIAR WITH PARTS 101 AND 25 OF THE FCC RULES AND REGULATIONS, THAT I HAVE EITHER PREPARED OR REVIEWED THE FREQUENCY COORDINATION DATA SUBMITTED WITH THIS APPLICATION, AND THAT IT IS COMPLETE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

BY:  _____

Gary K. Edwards
Senior Manager
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147

DATED: December 06, 2019