

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
GUSA Licensee LLC
MILPITAS, CA
(RFT2)
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
April 17, 2009

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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 most every case, those cases not cleared by terrain pathloss, will be cleared by frequency separation.

The following companies reported potential great circle interference conflicts that did not meet the objectives on a line-of-sight basis. These cases will be resolved and or with over-the-horizon losses and frequency separation to negate harmful interference from occurring with the proposed transmit-receive earth station.

Company

KGO Television, Inc.
NBC Telemundo License Co. - KNTV
Gannett River States Publishing Corp.
Channel 40, Inc.

No other carriers reported potential interference cases.

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 03/13/2009.

Company

BENETT KESSLER
Bluestone License Holdings, Inc. (KRCR)
CALIFORNIA STATE UNIVERSITY
CALIFORNIA STATE UNIVERSITY FOUNDATION
CBS Broadcasting Inc
CHANNEL 5 PUBLIC RADIO BROADCASTING INC
CHICO LICENSE, L.L.C.
CHRISTIAN COMMUNICATIONS OF CHICAGOLAND
COCOLA BROADCASTING COMPANIES LLC
COWLES CALIFORNIA MEDIA COMPANY
Catamount Broadcasting of Chico-Redding
Channel 40, Inc.
DIOCESE OF FRESNO EDUCATION CORP.
DONREY OF NEVADA INC
ENTRAVISION HOLDINGS, LLC
Ellis Communications, Inc.
FRANK J. AND LINDA L. AZEVEDO
Fisher Broadcasting - California TV LLC
GRAY TELEVISION LICENSEE, INC (KOLO)
Gannett River States Publishing Corp.
HEARST-ARGYLE STATIONS, INC - KSBW-TV
HUMBOLDT COUNTY
Hearst-Argyle Stations, Inc. (KCRA)
High Plains Broadcasting License Company
ION MEDIA SACRAMENTO LICENSE, INC.
ION MEDIA SAN JOSE LICENSE, INC.
KDTV License Partnership, G.P.
KFRE (TV) LICENSE, LLC
KFSN TELEVISION, LLC
KFTV License Partnership GP
KGO TELEVISION INCORPORATED
KGO Television, Inc.
KMEX License Partnership GP
KMPH (TV) LICENSE, LLC
KSBY Communications Inc
KSEE LICENSE, INC.
KTNC LICENSE, LLC
KTVU PARTNERSHIP (KRXI, NV)
KTVU PARTNERSHIP (KTVU - KICU, CA)
KUVI LICENSE PARTNERSHIP, G.P.

KUVS License Partnership, G.P.
KVIE INC
Lincoln Broadcasting Co, A California LP
MINORITY TELEVISION PROJECT
McGraw-Hill Broadcasting Comp - KERO
NBC TELEMUNDO LICENSE CO.
NBC Telemundo License Co. - KNTV
NORTHERN CALIFORNIA PUBLIC BROADCASTING
Newport Television LLC
PRAISE THE LORD STUDIO CHAPEL RADIO
RAUL AND CONSUELO PALAZUELOS
RAUL BROADCASTING COMPANY OF EUREKA, INC
RUBY MOUNTAIN BROADCASTING COMPANY
RURAL CALIFORNIA BROADCASTING CORP
SAINTE 51 L P
SAINTE PARTNERS II, L P
SAINTE SEPULVEDA INC
SAN MATEO COUNTY COMMUNITY COLLEGE DIST
SARKES TARZIAN INC
SEAL ROCK BROADCASTERS LLC
SIERRA BROADCASTING COMPANY
Sacramento Television Stations, Inc
San Francisco Television Station KBCW
TELEFUTURA FRESNO LLC
TRANS AMERICA BROADCASTING CORP
Telefutura Bakersfield LLC
Telefutura Sacramento, LLC
UNIVISION BAKERSFIELD LLC
Valley Public Television, Inc.
YOUNG BROADCASTING OF SAN FRANCISCO INC

3G Wireless, LLC
Broadcast Sports Corp
Broadcast Sports Enterprises Inc.
Casper, John
Citywide News Network, Inc.
Cohen, Elana
FISHMAN BROTHERS ENTERPRISES
GOODYEAR TIRE AND RUBBER COMPANY
Heiden Mr, William
Information Super Station LLC
NSM Surveillance
Onboard Images
Production & Satellite Services, Inc.
Regulus Media Services, Inc.
REMOTE FACILITIES CONSULTING SERVICES
RF Film, Inc
RF Technology, LLC
Total RF Marketing Inc
Universal Satellite Communications Inc.
Village Video Productions Inc
WOLFE AIR AVIATION
Wexler Video, Inc.
Winged Vision Inc

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: 04/17/2009
 Job Number: 090313COMSGE01

Administrative Information

Status ENGINEER PROPOSAL
 Call Sign
 Licensee Code ZAIRSA
 Licensee Name GUSA Licensee LLC

Site Information MILPITAS, CA RFT 2

Venue Name
 Latitude (NAD 83) 37° 25' 29.7" N
 Longitude (NAD 83) 121° 53' 46.2" W
 Climate Zone A
 Rain Zone 4
 Ground Elevation (AMSL) 6.71 m / 22.0 ft

Link Information

Satellite Type Low Earth Orbit
 Mode TR - Transmit-Receive
 Modulation Digital
 Minimum Elevation Angle 10.0°
 Azimuth Range 0.0° to 360°
 Antenna Centerline (AGL) 6.74 m / 22.1 ft

Antenna Information

	Receive - FCC32	Transmit - FCC32
Manufacturer	Alcatel	Alcatel
Model	9775	9775
Gain / Diameter	50.2 dBi / 5.5 m	47.6 dBi / 5.5 m
3-dB / 15-dB Beamwidth	1.00° / 2.00°	1.32° / 2.66°
Max Available RF Power (dBW/4 kHz)		11.4
(dBW/MHz)		20.4
Maximum EIRP (dBW/4 kHz)		59.0
(dBW/MHz)		68.0
Interference Objectives:	Long Term -153.0 dBW/MHz 20%	-140.0 dBW/4 kHz 20%
	Short Term -143.0 dBW/MHz 0.01%	-103.0 dBW/4 kHz 0.0025%

Frequency Information

	Receive 7.0 GHz	Transmit 5.1 GHz
Emission / Frequency Range (MHz)	70K0G7D / 6875.9 - 6879.1 7K00G1D / 6875.95 - 6877.15 2M50G2D / 6900.0 - 7055.0 1M23G7W - 1M23XXX / 6900.0 - 7055.0 N0N / 6900.0 - 7055.0	1M23G7W - 1M23XXX / 5096.0 - 5250.0 N0N / 5096.0 - 5250.0 76K0F2D / 5091.0 - 5092.0 40K0G2D / 5091.38 - 5091.62
Max Great Circle Coordination Distance	351.0 km / 218.1 mi	390.0 km / 242.3 mi
Precipitation Scatter Contour Radius	348.9 km / 216.8 mi	100.0 km / 62.1 mi

COMSEARCH

Earth Station Data Sheet

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

Coordination Values

MILPITAS, CA

Licensee Name GUSA Licensee LLC
Latitude (NAD 83) 37° 25' 29.7" N
Longitude (NAD 83) 121° 53' 46.2" W
Ground Elevation (AMSL) 6.71 m / 22.0 ft
Antenna Centerline (AGL) 6.74 m / 22.1 ft
Antenna Model Alcatel 5.5 Meter
Antenna Mode Receive 7.0 GHz Transmit 5.1 GHz
Interference Objectives: Long Term -153.0 dBW/MHz 20% -140.0 dBW/4 kHz 20%
Short Term -143.0 dBW/MHz 0.01% -103.0 dBW/4 kHz 0.0025%
Max Available RF Power 11.4 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 7.0 GHz		Transmit 5.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
0	0.00	72.58	-0.16	351.00	-0.16	390.00
5	0.00	68.45	-0.16	351.00	-0.16	390.00
10	0.00	64.38	-0.16	351.00	-0.16	390.00
15	0.00	60.39	-0.16	351.00	-0.16	390.00
20	0.00	56.48	-0.16	351.00	-0.16	390.00
25	0.00	52.70	-0.16	351.00	-0.16	390.00
30	0.00	49.07	-0.16	351.00	-0.16	390.00
35	0.00	45.62	-0.16	351.00	-0.16	390.00
40	0.00	42.41	-0.16	351.00	-0.16	390.00
45	0.00	39.50	-0.16	351.00	-0.16	390.00
50	0.00	36.97	-0.16	351.00	-0.16	390.00
55	0.00	34.88	-0.16	351.00	-0.16	390.00
60	0.00	33.34	-0.16	351.00	-0.16	390.00
65	0.00	32.42	-0.16	351.00	-0.16	390.00
70	0.00	32.17	-0.16	351.00	-0.16	390.00
75	0.00	32.62	-0.16	351.00	-0.16	390.00
80	0.00	33.72	-0.16	351.00	-0.16	390.00
85	0.00	35.43	-0.16	351.00	-0.16	390.00
90	0.00	37.65	-0.16	351.00	-0.16	390.00
95	0.00	40.30	-0.16	351.00	-0.16	390.00
100	0.00	43.30	-0.16	351.00	-0.16	390.00
105	0.00	46.58	-0.16	351.00	-0.16	390.00
110	0.00	50.09	-0.16	351.00	-0.16	390.00
115	0.00	53.77	-0.16	351.00	-0.16	390.00
120	0.00	57.59	-0.16	351.00	-0.16	390.00
125	0.00	61.52	-0.16	351.00	-0.16	390.00
130	0.00	65.54	-0.16	351.00	-0.16	390.00
135	0.00	69.63	-0.16	351.00	-0.16	390.00
140	0.00	73.76	-0.16	351.00	-0.16	390.00
145	0.00	77.94	-0.16	351.00	-0.16	390.00
150	0.00	82.15	-0.16	351.00	-0.16	390.00
155	0.00	86.37	-0.16	351.00	-0.16	390.00
160	0.00	90.60	-0.16	351.00	-0.16	390.00
165	0.00	94.84	-0.16	351.00	-0.16	390.00
170	0.00	99.05	-0.16	351.00	-0.16	390.00
175	0.00	103.25	-0.16	351.00	-0.16	390.00
180	0.00	107.42	-0.16	351.00	-0.16	390.00
185	0.00	111.55	-0.16	351.00	-0.16	390.00

COMSEARCH

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Coordination Values

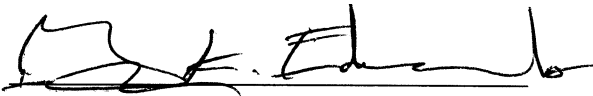
MILPITAS, CA

Licensee Name	GUSA Licensee LLC		
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Antenna Centerline (AGL)	6.74 m / 22.1 ft		
Antenna Model	Alcatel 5.5 Meter		
Antenna Mode	Receive 7.0 GHz		Transmit 5.1 GHz
Interference Objectives: Long Term	-153.0 dBW/MHz	20%	-140.0 dBW/4 kHz
Short Term	-143.0 dBW/MHz	0.01%	-103.0 dBW/4 kHz
Max Available RF Power			11.4 (dBW/4 kHz)
			0.0025%

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 7.0 GHz		Transmit 5.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
190	0.00	115.62	-0.16	351.00	-0.16	390.00
195	0.00	119.61	-0.16	351.00	-0.16	390.00
200	0.00	123.52	-0.16	351.00	-0.16	390.00
205	0.00	127.30	-0.16	351.00	-0.16	390.00
210	0.00	130.93	-0.16	351.00	-0.16	390.00
215	0.00	134.38	-0.16	351.00	-0.16	390.00
220	0.00	137.59	-0.16	351.00	-0.16	390.00
225	0.00	140.50	-0.16	351.00	-0.16	390.00
230	0.00	143.03	-0.16	351.00	-0.16	390.00
235	0.00	145.12	-0.16	351.00	-0.16	390.00
240	0.00	146.66	-0.16	351.00	-0.16	390.00
245	0.00	147.58	-0.16	351.00	-0.16	390.00
250	0.00	147.83	-0.16	351.00	-0.16	390.00
255	0.00	147.38	-0.16	351.00	-0.16	390.00
260	0.00	146.28	-0.16	351.00	-0.16	390.00
265	0.00	144.57	-0.16	351.00	-0.16	390.00
270	0.00	142.35	-0.16	351.00	-0.16	390.00
275	0.00	139.70	-0.16	351.00	-0.16	390.00
280	0.00	136.70	-0.16	351.00	-0.16	390.00
285	0.00	133.42	-0.16	351.00	-0.16	390.00
290	0.00	129.91	-0.16	351.00	-0.16	390.00
295	0.00	126.23	-0.16	351.00	-0.16	390.00
300	0.00	122.41	-0.16	351.00	-0.16	390.00
305	0.00	118.48	-0.16	351.00	-0.16	390.00
310	0.00	114.46	-0.16	351.00	-0.16	390.00
315	0.00	110.37	-0.16	351.00	-0.16	390.00
320	0.00	106.24	-0.16	351.00	-0.16	390.00
325	0.00	102.06	-0.16	351.00	-0.16	390.00
330	0.00	97.85	-0.16	351.00	-0.16	390.00
335	0.00	93.63	-0.16	351.00	-0.16	390.00
340	0.00	89.40	-0.16	351.00	-0.16	390.00
345	0.00	85.16	-0.16	351.00	-0.16	390.00
350	0.00	80.95	-0.16	351.00	-0.16	390.00
355	0.00	76.75	-0.16	351.00	-0.16	390.00

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: April 17, 2009