

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
ViaSat Inc.
Duluth, GA
Satellite Earth Station

Prepared By:
SkjeiTelecom, Inc.
7700 Leesburg Pike, Ste 238
Falls Church, VA 22043

March 12, 2019

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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 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 Skjei 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 03/04/2019.

S-band Contact

Name	Email Address
Gary Alexander	Gary.Alexander@wsbtv.com
Neil Mazur	Neil.Mazur@FOXTV.COM
G Davis	gadavis@11alive.com
Andy Kelly	Andy.Kelly@FOXTV.COM
Joseph Carey	joeseph.carey@turner.com
Dave Siegler	Dave.Siegler@coxinc.com
Joe Snelson	joe.snelson@meredith.com
Adam Bull	closedcaptions@wupatv.com
Gary Watkins	gary.watkins@cbs46.com
Jeffrey Whaley	Jeffery.whaley@cbs46.com
M Watson	mwatson2@11alive.com
Mark Johnson	Mark.Johnson@cbs46.com
April Michaels *	April.Michaels@cbs46.com
Larry Oaks	Larry.Oaks@meredith.com

*SBE Coordinator for Above 1 GHz

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.

March 4, 2019

Re: ViaSat, Inc.
Duluth, GA
S-Band Transmit Only Earth Station
PCN Job Number: 190304SKJTEL01

Dear Frequency Coordinator:

This notice is being provided in accordance with Section 25.203(c) of the FCC Rules and Regulations. We are forwarding the attached coordination data on behalf of Viasat, Inc., 6155 El Camino Real, Carlsbad, CA 92009 for an S-Band Temporary Transmit-Only Experimental Earth Station to be located in Duluth, GA.

The coordination notice is being circulated to the owners (or their protection agents) of all existing or proposed terrestrial facilities operating in a shared frequency band within the coordination contours of the proposed station(s). The testing is to occur between March 25, 2019 to October 25th, 2019.

We respectfully request that you examine this data for its interference potential with your system(s). In the event that your analysis identifies potential interference cases that have not been resolved, please contact us by March 22, 2019.

If there are any questions concerning this coordination notice, please contact Skjei Telecom.

Sincerely,

Skjei Telecom, Inc.

Ken Ryan
ken@skjeitelecom.com
7700 Leesburg Pike, 248S
Falls Church, VA 22043
(703) 917-4020
Fax: (703) 917-0098

Enclosure(s)

Skjei Telecom, Inc.
Earth Station Data Sheet

Date	3/04/2019	
Job Number	190304SKJTEL01	
Administrative Information		
Status	TEMP COORDINATION PROPOSAL	
Call Sign		
Licensee Code		
Licensee Name	ViaSat, Inc.	
Site Information		
Venue Name	Duluth, GA	
Latitude (NAD 83)	33-57-46.79	N
Longitude (NAD 83)	84-05-45.22	W
Climate Zone	A	
Rain Zone	1	
Ground Elevation (AMSL)	280.1 m / 919 ft	
Link Information		
Satellite Type	LEO, zenith testing only	
Mode	WorldView-1, WV-4	
Modulation	TO - Transmit-Only	
Minimum Elevation Angle	Digital	
Azimuth Range	12.5°	
Antenna Centerline (AGL)	0° - 360°	
Antenna Information Transmit	4.5m/15ft	
Manufacturer	FCC Reference Pattern	
Model	ViaSat	
Gain / Diameter	3440	
3-dB / 15-dB Half-Beamwidth	7.3m	
Max Available RF Power (dB)	0.919 / 1.92	
Maximum EIRP (dB)	-13.0	dBW/4kHz
	11.0	dBW/MHz
	27.5	dBW/4kHz
	51.5	dBW/MHz
Interference Objectives		
Long Term	-154	dBW/4 kHz
Short Term	-131	dBW/4 KHz
Frequency Information Transmit		
Emission / Frequency Range (MHz)	Transmit 2.05 GHz	
	1M40G7D / 2051.3 - 2052.7	
	1M40G7D / 2084.9875 - 2086.3875	
Max Great Circle Coordination Distance		
	220 km / 136.7 mi	

Skjei Telecom, Inc.

Earth Station Data Sheet

Site	Duluth, GA	
Satellite NGSO	NGSO, Worldview -1, WV-4	
Site Coordinates	33.9630	N
	84.0959	W
Maximum Horizon Gain	-10.0	dBi
Azimuth	0-360	degrees
Maximum RF Power Density	-13.0	dBW/4kHz
Maximum EIRP Density	27.5	dBW/4kHz

Azimuth to Earth Station (deg.)	Horizon Elevation (°)	Earth Station Disc. Angle (deg.)	Earth Station Gain (dBi)	Coordination Distance (km)
0	0	90.00	-10.00	220
5	0	90.00	-10.00	220
10	0	90.00	-10.00	220
15	0	90.00	-10.00	220
20	0	90.00	-10.00	220
25	0	90.00	-10.00	220
30	0	90.00	-10.00	220
35	0	90.00	-10.00	220
40	0	90.00	-10.00	220
45	0	90.00	-10.00	220
50	0	90.00	-10.00	220
55	0	90.00	-10.00	220
60	0	90.00	-10.00	220
65	0	90.00	-10.00	220
70	0	90.00	-10.00	220
75	0	90.00	-10.00	220
80	0	90.00	-10.00	220
85	0	90.00	-10.00	220
90	0	90.00	-10.00	220
95	0	90.00	-10.00	220
100	0	90.00	-10.00	220
105	0	90.00	-10.00	220
110	0	90.00	-10.00	220
115	0	90.00	-10.00	220
120	0	90.00	-10.00	220
125	0	90.00	-10.00	220
130	0	90.00	-10.00	220
135	0	90.00	-10.00	220
140	0	90.00	-10.00	220
145	0	90.00	-10.00	220
150	0	90.00	-10.00	220
155	0	90.00	-10.00	220
160	0	90.00	-10.00	220
165	0	90.00	-10.00	220
170	0	90.00	-10.00	220
175	0	90.00	-10.00	220
180	0	90.00	-10.00	220
185	0	90.00	-10.00	220

Skjei Telecom, Inc.

Earth Station Data Sheet

Site	Duluth, GA	
Satellite NGSO	NGSO, Worldview -1, WV-4	
Site Coordinates	33.9630	N
	84.0959	W
Maximum Horizon Gain	4.6	dBi
Azimuth	0-360	degrees
Maximum RF Power Density	-13.0	dBW/4kHz
Maximum EIRP Density	27.5	dBW/4kHz

Azimuth to Earth Station (deg.)	Horizon Elevation (°)	Earth Station Disc. Angle (deg.)	Earth Station Gain (dBi)	Coordination Distance (km)
190	0	90.00	-10.00	220
195	0	90.00	-10.00	220
200	0	90.00	-10.00	220
205	0	90.00	-10.00	220
210	0	90.00	-10.00	220
215	0	90.00	-10.00	220
220	0	90.00	-10.00	220
225	0	90.00	-10.00	220
230	0	90.00	-10.00	220
235	0	90.00	-10.00	220
240	0	90.00	-10.00	220
245	0	90.00	-10.00	220
250	0	90.00	-10.00	220
255	0	90.00	-10.00	220
260	0	90.00	-10.00	220
265	0	90.00	-10.00	220
270	0	90.00	-10.00	220
275	0	90.00	-10.00	220
280	0	90.00	-10.00	220
285	0	90.00	-10.00	220
290	0	90.00	-10.00	220
295	0	90.00	-10.00	220
300	0	90.00	-10.00	220
305	0	90.00	-10.00	220
310	0	90.00	-10.00	220
315	0	90.00	-10.00	220
320	0	90.00	-10.00	220
325	0	90.00	-10.00	220
330	0	90.00	-10.00	220
335	0	90.00	-10.00	220
340	0	90.00	-10.00	220
345	0	90.00	-10.00	220
350	0	90.00	-10.00	220
355	0	90.00	-10.00	220

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: _

Ken Ryan, P.E.
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ken@skjeitelecom.com

DATED: March 12, 2019