

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATION Enter a description of this application to identify it on the main menu:
Request for Special Temporary Authority Using Castle Rock, Colorado Earth Station E881304 for TT&C to Intelsat 29e

1. Applicant

Name:	Intelsat License LLC	Phone Number:	703-559-7848
DBA Name:		Fax Number:	703-559-8539
Street:	c/o Intelsat Corporation 7900 Tysons One Place	E-Mail:	susan.crandall@intelsat.com
City:	McLean	State:	VA
Country:	USA	Zipcode:	22102 -5972
Attention:	Susan H. Crandall		



File # SES-STA-20160623-00603
 Call Sign E881304 Grant Date 7-19-16
 (or other identifier)
 Temp Dates
 From: 7-20-16 To: 8-19-16
 Approved: [Signature]

Applicant: Intelsat License LLC ("Intelsat")
Call Sign: E881304
File No.: SES-STA-20160623-00603
Special Temporary Authority (STA)

Intelsat License LLC ("Intelsat") is granted STA, beginning July 20th, 2016, for 30 days, to operate its fixed earth station, 9 meter antenna, in Castle Rock, Colorado, Call sign E881304 to provide telemetry, tracking, and command ("TT&C") to Intelsat 29e at its permanent location of 50.0°W.L. orbital location in the bands 5850.0 – 5853.5 MHz and 6421.0 – 6424.5 MHz (Earth-to-space) and frequencies 3701.25 MHz, 3701.75 MHz, 3702.25 MHz, and 3702.75 MHz (space-to-Earth) under the following conditions:

1. Grant of this STA is without prejudice to any determination that the Commission may make regarding pending or future Intelsat applications.
2. All operations under this grant of STA shall be on an unprotected and non-harmful interference basis. Intelsat E881304 shall not cause harmful interference to, and shall not claim protection from interference caused to it by, any other lawfully operating radio communication system.
3. In the event of any harmful interference as a result of operations under this grant of STA, Intelsat License LLC shall cease operations immediately upon notification of such interference and shall immediately inform the Commission, in writing, of such an event.
5. Any action taken or expense incurred as a result of operations pursuant to this STA is solely at Intelsat License LLC's risk.

This grant is issued pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. § 0.261, and is effective upon release.



File # SES-STA-20160623-00603
Call Sign E881304 Grant Date 7-19-16
(or other identifier)
Term Dates
From: 7-20-16 To: 8-19-16
Approved: Paul E. Blawie

2. Contact			
Name:	Cynthia J. Grady	Phone Number:	703-559-6949
Company:	Intelsat Corporation	Fax Number:	703-559-8539
Street:	7900 Tysons One Place	E-Mail:	cynthia.grady@intelsat.com
City:	McLean	State:	VA
Country:	USA	Zipcode:	22102 -5972
Attention:		Relationship:	Legal Counsel
(If your application is related to an application filed with the Commission, enter either the file number or the IB Submission ID of the related application. Please enter only one.)			
3. Reference File Number or Submission ID			
4a. Is a fee submitted with this application?			
<input checked="" type="radio"/> If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114).			
<input type="radio"/> Governmental Entity <input type="radio"/> Noncommercial educational licensee			
<input type="radio"/> Other (please explain):			
4b. Fee Classification CGX - Fixed Satellite Transmit/Receive Earth Station			
5. Type Request			
<input type="radio"/> Use Prior to Grant <input type="radio"/> Change Station Location <input checked="" type="radio"/> Other			
6. Requested Use Prior Date			
7. CityCastle Rock			
8. Latitude (dd mm ss.s h) 39 16 34.0 N			

9. State CO	10. Longitude (dd mm ss.s h) 104 48 27.0 W
11. Please supply any need attachments. Attachment 1: STA Request Attachment 2: Exhibit A Attachment 3:	
12. Description. (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.) <div style="border: 1px solid black; padding: 5px;"> <p>Intelsat License LLC herein requests a grant of Special Temporary Authority for 30 days, commencing July 20, 2016, to use its Castle Rock, Colorado C-band earth station, call sign E881304, to provide telemetry, tracking, and command to Intelsat 29e at its permanent location of 50.0 W.L.</p> </div>	
13. By checking Yes, the undersigned certifies that neither applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of "party to the application"; for these purposes. Yes <input checked="" type="radio"/> No <input type="radio"/>	
14. Name of Person Signing Cynthia J. Grady	15. Title of Person Signing Regulatory Counsel, Intelsat Corporation
WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT (U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).	

FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT

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THE FOREGOING NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104-13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.

June 23, 2016

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: Request for Special Temporary Authority
Castle Rock, Colorado Earth Station E881304

Dear Ms. Dortch:

Intelsat License LLC (“Intelsat”) herein requests a grant of Special Temporary Authority (“STA”)¹ for 30 days, commencing July 20, 2016, to use its Castle Rock, Colorado C-band earth station—call sign E881304—to provide telemetry, tracking, and command (“TT&C”) to Intelsat 29e at its permanent location of 50.0° W.L.²

The proposed operations will be performed using the following frequencies: 3701.25 MHz, 3701.75 MHz, 3702.25 MHz, and 3702.75 MHz in the downlink; and 5850.0 - 5853.5 MHz and 6421.0 - 6424.5 MHz in the uplink. Intelsat expects to file an application for a permanent modification to E881304 to support Intelsat 29e TT&C operations at 50.0° W.L.

In further support of this request, Intelsat hereby attaches Exhibit A, which contains technical information that demonstrates that the operation of the earth station will be compatible with its electromagnetic environment and will not cause harmful interference into any lawfully operating terrestrial facility. Intelsat also notes that for purposes of this STA it is seeking to operate in the frequencies listed in the request at power levels not to exceed 26.0dBW.

The proposed TT&C operations at 50.0° W.L. will be consistent with Intelsat’s coordination agreements for the nominal 50° W.L. In the unlikely event that harmful interference occurs, Intelsat will take all necessary steps to eliminate the interference.

Grant of this STA request will allow Intelsat to provide TT&C services to the Intelsat 29e satellite at 50.0° W.L., which ensures safe station-keeping of the satellite. This, in turn, will help ensure continuity of service at the 50.0° W.L. orbital location and thereby promotes the public interest.

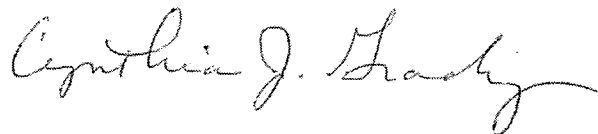
¹ Intelsat has filed its STA request, an FCC Form 159, a \$195.00 filing fee, and this supporting letter electronically via the International Bureau’s Filing System (“IBFS”).

² See *Policy Branch Information; Actions Taken*, Report No. SAT-01086, File No. SAT-LOA-20130722-0097 (May 22, 2015) (Public Notice).

Ms. Marlene H. Dortch
June 23, 2016
Page 2

Please direct any questions regarding this STA request to the undersigned at (703) 559-6949.

Respectfully submitted,

A handwritten signature in cursive script that reads "Cynthia J. Grady". The signature is written in black ink and is positioned above the typed name and title.

Cynthia J. Grady
Regulatory Counsel
Intelsat Corporation

cc: Paul Blais

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
Intelsat License LLC
CASTLE ROCK, CO
(E881304)
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
June 15, 2016

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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 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 05/02/2016.

Company

AT&T Corp.
AT&T Mobility Spectrum LLC - CO
AirLife Denver
Arvada Police Dept.
BNSF Railway Company
Black Hawk Police Department
Black Hills Corporation
Boulder, County of
CBS Communication Services Inc
CBS Television Stations
Cellular Inc. Network Corporation
City of Aurora
City of Colorado Springs
City of Lakewood, CO
Colorado Interstate Gas Company
Colorado Springs Utilities
County of Pueblo
Directlink, LLC
Douglas County Sheriff's Office
Entravision Holdings, LLC
FONES WEST DIGITAL SYSTEMS INC.
Gilpin County Sheriff's Office
Gogo LLC
Gray Television Licensee, LLC
Infrastructure Networks, Inc.
Intermountain Rural Electric Association
Kellin Communications
Live Wire Networks, Inc.
MHO Networks
Multimedia Holdings Corporation
NE Colorado Cellular, Inc.
New Cingular Wireless PCS LLC -Colorado
Nex-Tech Wireless, LLC
Olympic Wireless, LLC
Qwest Corporation
Roggen Telephone Enterprises, Inc.
Sangre de Cristo Communications, LLC
Sprint Communications Company, LP
Sprint Spectrum L.P.
Sprint Spectrum LP DBA Sprint PCS

State of Colorado
Tallgrass Operations, LLC
Tri-State Generation & Transmission Assn
Tribune Broadcasting Denver License, LLC
University Corp for Atmospheric Research
Verizon Wireless (VAW) LLC -CO/ID/MT/WY
Xcel Energy Services, 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: 06/15/2016
Job Number: 160502COMSGE02

Administrative Information

Status ENGINEER PROPOSAL
Call Sign E881304
Licensee Code INTELS
Licensee Name Intelsat License LLC

Site Information

CASTLE ROCK, CO

Venue Name
Latitude (NAD 83) 39° 16' 34.0" N
Longitude (NAD 83) 104° 48' 27.0" W
Climate Zone A
Rain Zone 2
Ground Elevation (AMSL) 2084.83 m / 6840.0 ft

Link Information

Satellite Type Geostationary
Mode TR - Transmit-Receive
Modulation Analog and Digital
Satellite Arc 50° W to 139° West Longitude
Azimuth Range 114.1° to 227.0°
Corresponding Elevation Angles 18.2° / 32.5°
Antenna Centerline (AGL) 6.0 m / 19.7 ft

Antenna Information

Manufacturer
Model
Gain / Diameter
3-dB / 15-dB Beamwidth

Receive - FCC32

ViaSat
8009A
50.3 dBi / 9.0 m
0.60° / 1.20°

Transmit - FCC32

ViaSat
8009A
53.8 dBi / 9.0 m
0.30° / 0.60°

Max Available RF Power (dBW/4 kHz)
(dBW/MHz)

3.7
27.7

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

57.5
81.5
80.8

Interference Objectives: Long Term -158.0 dBW/MHz 20%
Short Term -148.0 dBW/MHz 0.01%

-154.0 dBW/4 kHz 20%
-131.0 dBW/4 kHz 0.0025%

Frequency Information

Emission / Frequency Range (MHz)

Receive 4.0 GHz

300KFXD - 300KFXD / 3700.0 - 4200.0

Transmit 6.1 GHz

850KFXD - 1M20FXD / 6422.0 - 6424.5

Max Great Circle Coordination Distance
Precipitation Scatter Contour Radius

370.3 km / 230.1 mi
510.5 km / 317.2 mi

232.9 km / 144.7 mi
267.2 km / 166.0 mi

COMSEARCH

Earth Station Data Sheet

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

Coordination Values

CASTLE ROCK, CO

Licensee Name	Intelsat License LLC				
Latitude (NAD 83)	39° 16' 34.0" N				
Longitude (NAD 83)	104° 48' 27.0" W				
Ground Elevation (AMSL)	2084.83 m / 6840.0 ft				
Antenna Centerline (AGL)	6.0 m / 19.7 ft				
Antenna Model	ViaSat 9 Meter				
Antenna Mode	Receive 4.0 GHz		Transmit 6.1 GHz		
Interference Objectives:	Long Term	-158.0 dBW/MHz	20%	-154.0 dBW/4 kHz	20%
	Short Term	-148.0 dBW/MHz	0.01%	-131.0 dBW/4 kHz	0.0025%
Max Available RF Power	3.7 (dBW/4 kHz)				

Azimuth (°)	Receive 4.0 GHz		Transmit 6.1 GHz			
	Horizon Elevation (°)	Antenna Discrimination (°)	Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
0	4.48	113.33	-10.00	149.67	-10.00	100.00
5	4.52	108.50	-10.00	149.02	-10.00	100.00
10	4.70	103.66	-10.00	146.25	-10.00	100.00
15	4.82	98.81	-10.00	144.48	-10.00	100.00
20	4.55	93.95	-10.00	148.54	-10.00	100.00
25	4.02	89.09	-10.00	157.05	-10.00	100.00
30	3.53	84.26	-10.00	169.58	-10.00	100.00
35	3.52	79.42	-10.00	169.87	-10.00	100.00
40	3.44	74.60	-10.00	171.58	-10.00	100.00
45	2.89	69.84	-10.00	184.17	-10.00	100.00
50	2.15	65.15	-10.00	200.50	-10.00	109.71
55	1.88	60.44	-10.00	204.49	-10.00	115.58
60	1.39	55.82	-10.00	218.45	-10.00	127.85
65	1.10	51.23	-10.00	227.63	-10.00	134.04
70	0.00	46.96	-9.79	299.70	-9.79	196.15
75	0.00	42.48	-8.71	307.10	-8.71	200.31
80	0.00	38.11	-7.53	315.96	-7.53	204.80
85	0.00	33.88	-6.25	325.05	-6.25	208.08
90	0.00	29.86	-4.88	335.02	-4.88	213.56
95	0.26	25.97	-3.36	338.36	-3.36	213.99
100	0.24	22.70	-1.90	352.14	-1.90	222.25
105	0.27	20.06	-0.56	358.87	-0.56	225.42
110	0.23	18.44	0.36	370.32	0.36	232.89
115	0.31	17.95	0.65	362.24	0.65	226.19
120	0.47	18.70	0.20	338.27	0.20	209.15
125	0.29	20.93	-1.02	352.33	-1.02	221.14
130	0.64	23.57	-2.31	304.44	-2.31	190.38
135	0.45	27.00	-3.78	309.59	-3.78	195.93
140	0.51	30.07	-4.96	294.37	-4.96	185.84
145	0.52	32.99	-5.96	286.61	-5.96	180.90
150	0.72	35.51	-6.76	267.60	-6.76	164.16
155	0.90	37.75	-7.42	252.18	-7.42	151.67
160	1.01	39.68	-7.97	242.10	-7.97	143.93
165	1.09	41.26	-8.39	236.92	-8.39	140.10
170	1.51	42.05	-8.59	221.92	-8.59	129.58
175	1.45	42.84	-8.80	222.79	-8.80	130.45
180	1.56	42.97	-8.83	219.19	-8.83	127.54
185	1.79	42.50	-8.71	213.06	-8.71	122.28

COMSEARCH

Earth Station Data Sheet

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

Coordination Values

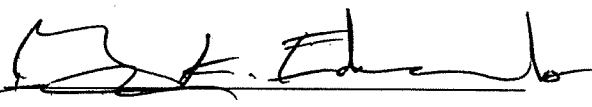
CASTLE ROCK, CO

Licensee Name	Intelsat License LLC		
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Antenna Model	ViaSat 9 Meter		
Antenna Mode	Receive 4.0 GHz	Transmit 6.1 GHz	
Interference Objectives:	Long Term	-158.0 dBW/MHz 20%	-154.0 dBW/4 kHz 20%
	Short Term	-148.0 dBW/MHz 0.01%	-131.0 dBW/4 kHz 0.0025%
Max Available RF Power			3.7 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 4.0 GHz		Transmit 6.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
190	1.75	41.83	-8.54	215.26	-8.54	124.03
195	1.84	40.55	-8.20	214.31	-8.20	122.97
200	1.89	38.90	-7.75	215.24	-7.75	123.41
205	2.48	36.39	-7.03	205.04	-7.03	113.94
210	2.70	33.91	-6.26	206.45	-6.26	112.54
215	3.11	31.53	-5.47	201.76	-5.47	107.78
220	3.19	30.06	-4.95	202.83	-4.95	108.41
225	2.67	29.88	-4.88	211.64	-4.88	118.34
230	2.96	29.66	-4.80	205.77	-4.80	113.14
235	3.06	30.39	-5.07	204.81	-5.07	110.28
240	2.99	31.99	-5.63	203.62	-5.63	109.55
245	3.16	33.98	-6.28	196.79	-6.28	103.88
250	3.06	36.69	-7.11	194.81	-7.11	102.67
255	3.14	39.66	-7.96	188.69	-7.96	100.00
260	3.25	42.95	-8.82	182.01	-8.82	100.00
265	3.22	46.56	-9.70	178.18	-9.70	100.00
270	3.45	50.24	-10.00	171.50	-10.00	100.00
275	3.52	54.15	-10.00	169.88	-10.00	100.00
280	4.02	58.04	-10.00	157.06	-10.00	100.00
285	4.65	62.04	-10.00	147.03	-10.00	100.00
290	4.36	66.38	-10.00	151.56	-10.00	100.00
295	4.44	70.68	-10.00	150.28	-10.00	100.00
300	4.59	75.01	-10.00	147.87	-10.00	100.00
305	4.64	79.39	-10.00	147.18	-10.00	100.00
310	4.29	83.82	-10.00	152.72	-10.00	100.00
315	4.02	88.22	-10.00	157.08	-10.00	100.00
320	4.76	92.64	-10.00	145.40	-10.00	100.00
325	5.39	97.10	-10.00	137.79	-10.00	100.00
330	5.90	101.59	-10.00	134.08	-10.00	100.00
335	5.83	106.01	-10.00	134.81	-10.00	100.00
340	5.42	110.34	-10.00	137.57	-10.00	100.00
345	4.54	114.49	-10.00	148.69	-10.00	100.00
350	4.10	118.61	-10.00	155.72	-10.00	100.00
355	4.20	118.11	-10.00	154.10	-10.00	100.00

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: June 15, 2016