Date & Time Filed: Jul 22 2018 1:44:10:116PM File Number: SES-REG-INTR2018-04118

Callsign/Satellite ID:

# APPLICATION FOR EARTH STATION AUTHORIZATIONS FCC Use Only FCC 312 MAIN FORM FOR OFFICIAL USE ONLY

#### APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu: Registration for a multiple C–Band R/O earth stations in Knoxville, TN.

1–8. Legal Name of Ap	plicant		
Name:	Comcast Cable Communications Management, LLC	Phone Number:	215–286–8818
DBA Name:		Fax Number:	215–286–1022
Street:	One Comcast Center	E–Mail:	sheila_smith@cable.comcast.com
	1701 John F. Kennedy Boulevard		
City:	Philadelphia	State:	PA
Country:	USA	Zipcode:	19103 -2838
Attention:	Sheila Smith		

9–16. Name of Contact Representative

Name: Catherine Fox Phone Number: 215–286–8818

**Company: Fax Number:** 215–286–1022

Street: One Comcast Center E–Mail: Catherine\_Fox@Comcast.com

1701 John F. Kennedy Boulevard

City: Philadelphia State: PA

**Country:** USA **Zipcode:** 19103–2838

Attention: Relationship:

#### **CLASSIFICATION OF FILING**

17. Choose the button next to the classification that applies to this filing for both questions a. and b. Choose only one for 17a and only one for 17b.  a.  a.  a. 1. Earth Station  (N/A) a2. Space Station	b. b1. Application for License of New Station b2. Application for Registration of New Domestic Receive—Only Station (N/A) b3. Amendment to a Pending Application (N/A) b4. Modification of License or Registration (N/A) b5. Assignment of License or Registration (N/A) b6. Transfer of Control of License or Registration (N/A) b7. Notification of Minor Modification (N/A) b8. Application for License of New Receive—Only Station Using Non—U.S. Licensed Satellite (N/A) b9. Letter of Intent to Use Non—U.S. Licensed Satellite to Provide Service in the United States
	■ b10. Other (Please specify)
	<b>♦</b> b11. Application for Earth Station to Access a Non–U.S.satellite Not Currently Authorized to
	Provide the Proposed Service in the Proposed Frequencies in the United States.  b12. Application for Database Entry
	(N/A) b13. Amendment to a Pending Database Entry Application (N/A) b14. Modification of Database Entry
17c. Is a fee submitted with this application	ion?
	159. If No, indicate reason for fee exemption (see 47 C.F.R.Section 1.1114).
Governmental Entity Noncomme	ercial educational licensee
Other(please explain):	
17d.	
Fee Classification CMO – Receive Only E	arth Station

18. If this filing is in reference to an existing station, enter:  (a) Call sign of station:  Not Applicable  19. If this filing is an amendment to a pending application enter:  (a) Date pending application was filed:  (b) File number of pending application:  Not Applicable  Not Applicable
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TYPE OF SERVICE	
20. NATURE OF SERVICE: This filing is for an authorization to provide	or use the following type(s) of service(s): Select all that apply:
a. Fixed Satellite	
b. Mobile Satellite	
c. Radiodetermination Satellite	
d. Earth Exploration Satellite	
e. Direct to Home Fixed Satellite	
f. Digital Audio Radio Service	
g. Other (please specify)	
21. STATUS: Choose the button next to the applicable status. Choose	22. If earth station applicant, check all that apply.
only one.	Using U.S. licensed satellites
O Common Carrier Non–Common Carrier	Using Non–U.S. licensed satellites
23. If applicant is providing INTERNATIONAL COMMON CARRIER sefacilities:	ervice, see instructions regarding Sec. 214 filings. Choose one. Are these
O Connected to a Public Switched Network Not connected to	o a Public Switched Network

24. FREQUENCY BAND(S): Place an "X" in the box(es) next to all applicable frequency band(s).
a. C–Band (4/6 GHz) b. Ku–Band (12/14 GHz)
c.Other (Please specify upper and lower frequencies in MHz.)
Frequency Lower: Frequency Upper:
TYPE OF STATION
25. CLASS OF STATION: Choose the button next to the class of station that applies. Choose only one.
a. Fixed Earth Station
b. Temporary–Fixed Earth Station
c. 12/14 GHz VSAT Network
d. Mobile Earth Station
(N/A) e. Geostationary Space Station
(N/A) f. Non-Geostationary Space Station
g. Other (please specify)
26. TYPE OF EARTH STATION FACILITY: Choose only one.
Transmit/Receive Transmit-Only Receive-Only N/A
PURPOSE OF MODIFICATION
27. The purpose of this proposed modification is to: (Place an 'X' in the box(es) next to all that apply.)
Not Applicable
<b>1</b>

#### ENVIRONMENTAL POLICY

28. Would a Commission grant of any proposal in this application or amendment have a significant environmental impact as defined by 47 CFR 1.1307? If YES, submit the statement as required by Sections 1.1308 and 1.1311 of the Commission's rules, 47 C.F.R. §§ 1.1308 and 1.1311, as an exhibit to this application. A Radiation Hazard Study must accompany all applications for new transmitting facilities, major modifications, or major amendments.	٥	Yes	No     No	
ALIEN OWNERSHIP Earth station applicants not proposing to provide broadcast, common carrier, aerona aeronautical fixed radio station services are not required to respond to Items 30–34.	nutical er	route	or	
29. Is the applicant a foreign government or the representative of any foreign government?	O Yes	<b>●</b> N	o	
30. Is the applicant an alien or the representative of an alien?	• Yes	O N	o 🌘 N/A	`
31. Is the applicant a corporation organized under the laws of any foreign government?	O Yes	O N	o <b>()</b> N/A	`
32. Is the applicant a corporation of which more than one–fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	O Yes	O N	o 💿 N/A	`

33. Is the applicant a corporation directly or indirectly controlled by any other corporation of which more than one–fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	O Yes O No	o o N/A
34. If any answer to questions 29, 30, 31, 32 and/or 33 is Yes, attach as an exhibit an identification of the aliens or foreign entities, their nationality, their relationship to the applicant, and the percentage of stock they own or vote.		
BASIC QUALIFICATIONS		
35. Does the Applicant request any waivers or exemptions from any of the Commission's Rules? If Yes, attach as an exhibit, copies of the requests for waivers or exceptions with supporting documents.	O Yes	No
36. Has the applicant or any party to this application or amendment had any FCC station authorization or license revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission? If Yes, attach as an exhibit, an explination of circumstances.	<b>O</b> Yes	<b>⊚</b> No

37. Has the applicant, or any party to this application or amendment, or any party directly or indirectly controlling the applicant ever been convicted of a felony by any state or federal court? If Yes, attach as an exhibit, an explination of circumstances.	O Yes	<b>⊚</b> No
38. Has any court finally adjudged the applicant, or any person directly or indirectly controlling the applicant, guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement or any other means or unfair methods of competition? If Yes, attach as an exhibit, an explanation of circumstances	O Yes	<b>⊚</b> No
39. Is the applicant, or any person directly or indirectly controlling the applicant, currently a party in any pending matter referred to in the preceding two items? If yes, attach as an exhinit, an explanation of the circumstances.	O Yes	<b>⊘</b> No
40. If the applicant is a corporation and is applying for a space station license, attach as an exhibit the names, address, and citizenship of those stockholders owning a record and/or voting 10 percent or more of the Filer's voting stock and the percentages so held. In the case of fiduciary control, indicate the beneficiary(ies) or class of beneficiaries. Also list the names and addresses of the officers and directors of the Filer.		

41. 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	O No
42a. Does the applicant intend to use a non–U.S. licensed satellite to provide service in the United States? If Yes, answer 42b and attach an exhibit providing the information specified in 47 C.F.R. 25.137, as appropriate. If No, proceed to question 43.	O Yes	No
42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued, coordinated or is in the process of coordinating the space station?	what administ	ration has
43. Description. (Summarize the nature of the application and the services to be provided). (If the not appear in this box, please go to the end of the form to view it in its entirety.)	complete desc	ription does
Registration for multiple C-Band R/O earth stations that will support stationerations.	on broadca	ast

43a. Geographic Service Rule Certification By selecting A, the undersigned certifies that the applicant is not subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25.	<b>●</b> A
By selecting B, the undersigned certifies that the applicant is subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25 and will comply with such requirements.	O B
By selecting C, the undersigned certifies that the applicant is subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25 and will not comply with such requirements because it is not feasible as a technical matter to do so, or that, while technically feasible, such services would require so many compromises in satellite design and operation as to make it economically unreasonable. A narrative description and technical analysis demonstrating this claim are attached.	<b>o</b> c

#### **CERTIFICATION**

The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. The applicant certifies that grant of this application would not cause the applicant to be in violation of the spectrum aggregation limit in 47 CFR Part 20. All statements made in exhibits are a material part hereof and are incorporated herein as if set out in full in this application. The undersigned, individually and for the applicant, hereby certifies that all statements made in this application and in all attached exhibits are true, complete and correct to the best of his or her knowledge and belief, and are made in good faith.

Individual			
Unincorporated Association			
Partnership			
Corporation			
Governmental Entity			
Other (please specify)			
LLC			
45. Name of Person Signing		AC Title of Donous Cionina	
		46. Title of Person Signing	
45. Name of Person Signing Catherine Fox		Deputy General Counsel	
Catherine Fox	nents.		
	nents.  Attachment 2:		
Catherine Fox  47. Please supply any need attachm	1	Deputy General Counsel	
Catherine Fox  47. Please supply any need attachm	1	Deputy General Counsel	
Catherine Fox  47. Please supply any need attachm Attachment 1:	Attachment 2:	Deputy General Counsel	NMENT

#### SATELLITE EARTH STATION AUTHORIZATIONS FCC Form 312 – Schedule B:(Technical and Operational Description) FOR OFFICIAL USE ONLY

Location of Earth Station Site

E1: Site Identifier: Knoxville E5. Call Sign:

E2: Contact Name Donnie Grider E6. Phone 865–999–5397

Number:

E3. Street: 100 B. Sharp's E7. City: Knoxville

Ridge Memorial

Drive

E8. County: Knox

E4. State TN E9. Zip Code 37902

E10. Area of Operation: TN

E11. Latitude: 36 °0 '3.4 "N

E12. Longitude: 83 °57 '3.2 "W

E13. Lat/Lon Coordinates are: NAD-27 NAD-83 N/A

E14. Site Elevation (AMSL): 367.77 meters

E15. If the proposed antenna(s) operate in the Fixed Satellite Service (FSS) with geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a) and (b) as demonstrated by the manufacturer's qualification measurement? If NO, provide as a technical analysis showing compliance with two–degree spacing policy.	<b>⊗</b> Ye	ès i	O No	O N/A
E16. If the proposed antenna(s) do not operate in the Fixed Satellite Service (FSS), or if they operate in the Fixed Satellite Service (FSS) with non–geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a2) and (b) as demonstrated by the manufacturer's qualification measurements?	O Ye	ès i	O No	<b>⊚</b> N/A
E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	O Y	Zes .	•	No
E18. Is frequency coordination required? If YES, attach a frequency coordination report as	<b>●</b> Y	/es	0	. No
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	O Y	/es	•	, No
E20. FAA Notification – (See 47 CFR Part 17 and 47 CFR part 25.113(c)) Where FAA notification is required, have you attached a copy of a completed FCC Form 854 and or the FAA's study regarding the potential hazard of the structure to aviation? FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL RESULT IN THE RETURN OF THIS APPLICATION.	1	/es	•	. No
POINTS OF COMMUNICATION	<del></del>			
Satellite Name:PERMITTED LIST   If you selected OTHER, please enter the following:				

E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:

## POINTS OF COMMUNICATION (Destination Points)

E25. Site Identifier:	
E26. Common Name:	E27. Country:

## ANTENNA

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer		Size <meters></meters>	E41/42. Antenna GainTransmint and/or Recieve (dBi atGHz)
Knoxville	4.5	1	Scientific Atlanta	4.5 Meter	4.5	43.3 dBi at 3.95

E28. Antenna Id	E33/34. Diameter Minor/Major (meters)	E35. Above Ground Level  (meters)	(meters)	Height Above Ground Level 	Input Power at antenna flange 	Maximum Antenna Height	E40. Total EIRP for al carriers  (dBW)
4.5	0.0/0.0	4.5	372.27	0.0	0.0	0.0	0.0

## FREQUENCY

E28.	E43/44. Frequency Bands (MHz)	E45. T/R Mode			E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
4.5	3700 4200	R	Horizontal and Vertical	36M0G7W	0.0	0.0

E	250. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its	
entii	rety.)	_
	Digital Video Carrier	
		•

## FREQUENCY COORDINATION

E28. Antenna Id		E52/53. Frequency Limits(MHz)	Range of Satellite Arc E/W Limit	E56. Earth Station Azimuth Angle Eastern Limit	Antenna Elevation Angle	Station Azimuth Angle	Elevation Angle Western	E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)
4.5	Geostationary	3700 4200	60.0/ 143.0	142.9	41.1	250.6	16.2	0.0

## REMOTE CONTROL POINT LOCATION

E61. Call Sign	E65. Phone Number			
NOTE: Please enter the callsign of the contro callsign for which this application is being filed.				
E62. Street Address				
E63. City	E67. County		E64/68. State/Country	E66. Zip Code

#### SATELLITE EARTH STATION AUTHORIZATIONS FCC Form 312 – Schedule B:(Technical and Operational Description) FOR OFFICIAL USE ONLY

Location of Earth Station Site

E1: Site Identifier: Knoxville E5. Call Sign:

E2: Contact Name Donnie Grider E6. Phone 865–999–5397

Number:

E3. Street: 5720 Asheville E7. City: Knoxville

Hwy

E8. County: Knox

E4. State TN E9. Zip Code 37902

E10. Area of Operation: TN

E11. Latitude: 36 °0 '34.1 "N

E12. Longitude: 83 °50 '15.9 "W

E13. Lat/Lon Coordinates are: NAD-27 NAD-83 N/A

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E15. If the proposed antenna(s) operate in the Fixed Satellite Service (FSS) with geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a) and (b) as demonstrated by the manufacturer's qualification measurement? If NO, provide as NON–COMPLIANT WAIVER a technical analysis showing compliance with two–degree spacing policy.	O Yes	s <b>©</b> No	O N/A
E16. If the proposed antenna(s) do not operate in the Fixed Satellite Service (FSS), or if they operate in the Fixed Satellite Service (FSS) with non–geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a2) and (b) as demonstrated by the manufacturer's qualification measurements?	O Yes	s O No	o o N/A
E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	O Ye	:s <b>(</b>	No
E18. Is frequency coordination required? If YES, attach a frequency coordination report as	● Ye	es (	) No
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	O Ye	es (	No
E20. FAA Notification – (See 47 CFR Part 17 and 47 CFR part 25.113(c)) Where FAA notification is required, have you attached a copy of a completed FCC Form 854 and or the FAA's study regarding the potential hazard of the structure to aviation? FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL RESULT IN THE RETURN OF THIS APPLICATION.	O Ye	es (	<b>N</b> o
POINTS OF COMMUNICATION	-		
Satellite Name: PERMITTED LIST   If you selected OTHER, please enter the following:	<u> </u>		

E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:

## POINTS OF COMMUNICATION (Destination Points)

E25. Site Identifier:	
E26. Common Name:	E27. Country:

## ANTENNA

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer			E41/42. Antenna GainTransmint and/or Recieve (dBi atGHz)
Knoxville	3.8	1	Patriot	3.8 Meter	3.8	42.9 dBi at 3.95

E28. Antenna Id	E33/34. Diameter Minor/Major (meters)	E35. Above Ground Level  (meters)	(meters)	Height Above Ground	Input Power at antenna flange 	Maximum Antenna Height	E40. Total EIRP for al carriers  (dBW)
3.8	0.0/0.0	3.8	262.61	0.0	0.0	0.0	0.0

## FREQUENCY

E28. Antenna Id	E43/44. Frequency Bands (MHz)	E45. T/R Mode			E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
3.8	3700 4200	R	Horizontal and Vertical	36M0G7W	0.0	0.0

I	E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its							
enti	rety.)							
	Digial Video Carrier							

## FREQUENCY COORDINATION

E28. Antenna Id		E52/53. Frequency Limits(MHz)	Range of Satellite Arc E/W Limit	Station Azimuth Angle	E57. Antenna Elevation Angle Eastern Limit	Station Azimuth Angle		E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)
3.8	Geostationary	3700 4200	60.0/ 143.0	143.1	41.2	250.7	16.1	0.0

## REMOTE CONTROL POINT LOCATION

E61. Call Sign	E65. Phone Number			
NOTE: Please enter the callsign of the controcallsign for which this application is being filed.				
E62. Street Address				
E63. City	E67. County		E64/68. State/Country	E66. Zip Code

#### FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT

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