Date & Time Filed: Sep 17 2015 3:34:59:193PM File Number: SES-MOD-INTR2015-01673

FCC APPLICATION FOR SPACE AND EARTH STATION:MOD OR AMD – MAIN FORM	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:

Yacolt VSAT – Add Antennas

-8. Legal Name of	Applicant		
Name:	MCI Communications Services, Inc.	Phone Number:	972–718–4454
DBA Name:		Fax Number:	
Street:	600 Hidden Ridge	E-Mail:	judy.geise@verizon.com
	M.C. HQE03H07		
City:	Irving	State:	TX
Country	: USA	Zipcode:	75038 –
Attentio	n: Ms Judy Geise		
	<b>y</b>		

9–16. Name of Contact Representative

Name: MCI Communications Services,

**Phone Number:** Inc. (fka MCI WorldCom

972-718-4454

Communications, Inc.)

**Company:** Fax Number:

**Street:** 600 Hidden Ridge E-Mail: judy.geise@verizon.com

M.C. HQE03H07

TXCity: Irving **State:** 

**Country:** USA Zipcode: 75038-

**Relationship: Attention:** Ms Judy Geise Other

**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.  a1. Earth Station a2. Space Station	<ul> <li>(N/A) b1. Application for License of New Station</li> <li>(N/A) b2. Application for Registration of New Domestic Receive—Only Station</li> <li>b3. Amendment to a Pending Application</li> <li>b4. Modification of License or Registration</li> <li>b5. Assignment of License or Registration</li> <li>b6. Transfer of Control of License or Registration</li> <li>b7. Notification of Minor Modification</li> <li>(N/A) b8. Application for License of New Receive—Only Station Using Non—U.S. Licensed Satellite</li> <li>(N/A) b9. Letter of Intent to Use Non—U.S. Licensed Satellite to Provide Service in the United States</li> <li>(N/A) b10. Other (Please specify)</li> <li>(N/A) 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</li> <li>(N/A) b12. Application for Database Entry</li> <li>b13. Amendment to a Pending Database Entry Application</li> </ul>		
~	159. If No, indicate reason for fee exemption (see 47 C.F.R.Section 1.1114).		
Other(please explain):	rciai educational ficensee		
17d.  Fee Classification CGV – Fixed Satellite V	/SAT System		

18. If this filing is in reference to an existing station, enter:	19. If this filing is an amendment to a pending apmodification please enter only the file number:	oplication enter both fields, if this filing is a
(a) Call sign of station: E070068	(a) Date pending application was filed:	(b) File number:
2070000	01/20/2009	SESMOD2009012200057

#### 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						
Common Carrier Non–Common Carrier	Using Non–U.S. licensed satellites						
23. If applicant is providing INTERNATIONAL COMMON CARRIER service, see instructions regarding Sec. 214 filings. Choose one. Are these facilities:							
Connected to a Public Switched Network Not connected to a Public Switched Network N/A							

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: (Please specify additional frequencies in an attachment)
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
d. Mobile Earth Station
e. Geostationary Space Station
f. Non–Geostationary Space Station
g. Other (please specify)
26. TYPE OF EARTH STATION FACILITY:
Transmit/Receive Transmit-Only Receive-Only N/A
"For Space Station applications, select 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.)
a — authorization to add new emission designator and related service
b — authorization to change emission designator and related service
c — authorization to increase EIRP and EIRP density
d — authorization to replace antenna
e — authorization to add antenna
f — authorization to relocate fixed station
g — authorization to change frequency(ies)
h — authorization to add frequency
i — authorization to add Points of Communication (satellites & Double
j — authorization to change Points of Communication (satellites & Double of Communication)
k — authorization for facilities for which environmental assessment and
radiation hazard reporting is required
1 — authorization to change orbit location
m — authorization to perform fleet management
n — authorization to extend milestones
o — Other (Please specify)

#### **ENVIRONMENTAL POLICY**

under the laws of a foreign country?

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.	_		•			
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.	autic	al er	ı roı	ıte o	r	
29. Is the applicant a foreign government or the representative of any foreign government?	٥	Yes	•	, No	)	
30. Is the applicant an alien or the representative of an alien?	0	Yes	•	. No	0	N/A
31. Is the applicant a corporation organized under the laws of any foreign government?	0	Yes	•	, No	, o	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	0	Yes	•	. No	· o	N/A

O Yes No

28. Would a Commission grant of any proposal in this application or amendment have a significant environmental

	<del></del>	
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 •	No 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.	• 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.	O Yes	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.	• 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	• Yes	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.	• 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.	○ Yes	<b>⊘</b> No
42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued, what administration has coordinated or is in the process of coordinating the space station?		

43. Description. (Summarize the nature of the application and the services to be provided). (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

MCI Communications Services, Inc (Verizon) wishes to add an additional VSAT hub and remote VSAT antennas to the current existing VSAT network Call Sign E070068. The VSAT network will provide digital video and data services.

Yacolt Earth Station

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.

44. Applicant is a (an): (Choose the button next to applicable response.)	
o Individual	
Unincorporated Association	
Partnership	
<b>⊚</b> Corporation	
Governmental Entity	
Other (please specify)	
45. Name of Person Signing	46. Title of Person Signing
April Yalenezian	Wireless Engineer
>	
	ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT EVOCATION OF ANY STATION AUTHORIZATION FORFEITURE (U.S. Code, Title 47, Section 503).

Location of Earth Station Site E1: Site Identifier: YAC E070068 E5. Call Sign: E2: Contact Name Ron Quinn E6. Phone 360-686-3065 Number: E3. Street: 604 E. Hoag St. E7. City: Yacolt E8. County: Clark E9. Zip Code E4. State WA 98675 E10. Area of Operation: CONUS, AK, HI, PR, VI 45 °51 '43.0 "N E11. Latitude: E12. Longitude: 122 °23 '46.0 "W E13. Lat/Lon Coordinates are: NAD-27 **⋒** NAD-83 N/A E14. Site Elevation (AMSL): 216.0 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.

E16. If the proposed antenna(s) do not operate in the Fixed Satellite Set Satellite Service (FSS) with non–geostationary satellites, do(es) the progain patterns specified in Section 25.209(a2) and (b) as demonstrated b measurements?	oposed antenna(s) comply with the antenna	O Yes	O No	● N/A
E17. Is the facility operated by remote control? If YES, provide the loca point.	ation and telephone number of the control	O Yes	0	No
E18. Is frequency coordination required? If YES, attach a frequency coordination	ordination report as	T		
E16. Is frequency coordination required: If TES, attach a frequency co	ordination report as	O Yes	•	No
E19. Is coordination with another country required? If YES, attach the coordination contours as	name of the country(ies) and plot of	O Yes	•	No
E20. FAA Notification – (See 47 CFR Part 17 and 47 CFR part 25.1 have you attached a copy of a completed FCC Form 854 and/or the FAI the structure to aviation?  FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL APPLICATION.	A's study regarding the potential hazard of	O Yes	•	No
POINTS OF COMMUNICATION				
Satellite Name: PERMITTED LIST   If you selected OTHER, ple	ease enter the following:			
E21. Common Name:	E22. ITU Name:			
E23. Orbit Location:	E24. Country:			
POINTS OF COMMUNICATION (Destination Points)				
E25. Site Identifier: YAC				

E26. Common Name:	E27. Country: USA

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size <meters></meters>	E41/42. Antenna Gain Transmint and/or Recieve (dBi atGHz)
YAC	R11	3000	Prodelin	1951	0.95	39.7 dBi at 11.95
YAC	R11	3000	Prodelin	1951	0.95	41.2 dBi at 14.25

Id	Diameter		, ,	Height Above	Input Power at antenna flange	E39. Maximum Antenna Height Above Rooftop (meters)	EIRP for al
R11	0.95/0.95	1.5	0.0	0.0	13.0	0.0	52.34

	E43/44. Frequency Bands (MHz)	E45. T/R Mode			E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
R11	11700 12200	R	Horizontal and Vertical	156KG7W	0.0	0.0

E50. Modulation entirety.)	and Services (If the	ne complete description	on does not appear in	this box, please go to	o the end of the form	to view it in its
Digital Vi	deo, and Data					
R11	11700 12200	R	Horizontal and Vertical	2M50G7W	0.0	0.0
E50. Modulation entirety.)  Digital Vi	deo, and Data	e complete description	on does not appear in	this box, please go to	o the end of the form	to view it in its
R11	14000 14500	Т	Horizontal and Vertical	156KG7W	43.11	27.2
E50. Modulation entirety.)  Digital Vi	and Services (If the	ne complete description	on does not appear in	this box, please go to	o the end of the form	to view it in its
R11	14000 14500	Т	Horizontal and Vertical	2M50G7W	52.34	24.38

entirety.)  Digital	ation and Servic	d Data	p	does not appear				
E28. Antenna Id	Y COORDINA E51. Satellite Orbit Type	E52/53. Frequency Limits(MHz)	E54/55. Range of Satellite Arc Eastern/West ern Limit	E56. Earth Station Azimuth Angle Eastern Limit	E57. Antenna Elevation Angle Eastern Limit	E58. Earth Station Azimuth Angle Western Limit	E59. Antenna Elevation Angle Western Limit	E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)
R11	Geostationary	11700 12200	60.0/143.0	90.0	5.0	180.0	5.0	0.0
	Geostationary	14000 14500	60.0/143.0	90.0	5.0	180.0	5.0	0.0
REMOTE CO	ONTROL POIN	T LOCATION	1	'	•	!	Į.	
	ase enter the calls	sign of the contro	•		. Phone Number			

E68. County

E67/68. State/Country E64. Zip Code

E62. Street Address

E63. City

Location of Earth Station Site E1: Site Identifier: YAC E070068 E5. Call Sign: E2: Contact Name Ron Quinn E6. Phone 360-686-3065 Number: E3. Street: 604 E Hoag St E7. City: Yacolt E8. County: Clark E9. Zip Code E4. State WA 98675 E10. Area of Operation: CONUS, AK, HI, PR, VI 45 °51 '43.0 "N E11. Latitude: E12. Longitude: 122 °23 '46.0 "W E13. Lat/Lon Coordinates are: NAD-27 **⋒** NAD-83 N/A E14. Site Elevation (AMSL): 216.0 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.

E16. If the proposed antenna(s) do not operate in the Fixed Satellite Set Satellite Service (FSS) with non–geostationary satellites, do(es) the progain patterns specified in Section 25.209(a2) and (b) as demonstrated by measurements?	posed antenna(s) comply with the antenna	O Yes	O No	<b>⊚</b> N/A
E17. Is the facility operated by remote control? If YES, provide the loca point.	ation and telephone number of the control	• Yes	•	No
E18. Is frequency coordination required? If YES, attach a frequency coordination	ordination report as	O Yes	•	No
E19. Is coordination with another country required? If YES, attach the a coordination contours as	name of the country(ies) and plot of	O Yes	•	No
E20. FAA Notification – (See 47 CFR Part 17 and 47 CFR part 25.1 have you attached a copy of a completed FCC Form 854 and/or the FAZ the structure to aviation?  FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL APPLICATION.	A's study regarding the potential hazard of	O Yes	•	No
POINTS OF COMMUNICATION		<u> </u>		
Satellite Name: PERMITTED LIST   If you selected OTHER, ple	ase enter the following:			
E21. Common Name:	E22. ITU Name:			
E23. Orbit Location:	E24. Country:			
POINTS OF COMMUNICATION (Destination Points)	•			·
E25. Site Identifier: YAC				

E26. Common Name:	E27. Country: USA
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Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size <meters></meters>	E41/42. Antenna Gain Transmint and/or Recieve (dBi atGHz)	
YAC	R12	3000	Prodelin	1981	0.98	39.8 dBi at 11.85	
YAC	R12	3000	Prodelin	1981	0.98	41.3 dBi at 14.125	

Id	Diameter		` ′	Height Above	Input Power at	E39. Maximum Antenna Height Above Rooftop (meters)	EIRP for al
R12	0.98/0.98	1.5	0.0	0.0	14.0	0.0	52.76

	E43/44. Frequency Bands (MHz)	E45. T/R Mode			E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
R12	11700 12200	R	Horizontal and Vertical	156KG7W	0.0	0.0

E50. Modulation entirety.)	n and Services (If t	he complete descripti	on does not appear in	n this box, please go t	to the end of the form	to view it in its			
Digital V	ideo, and Data								
R12	11700 12200	R	Horizontal and Vertical	2M50G7W	0.0	0.0			
entirety.)  Digital V	ideo, and Data				to the end of the form				
R12	14000 14500	Т	Horizontal and Vertical	156KG7W	43.21	27.3			
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 entirety.)  Digital Video, and Data									
R12	14000 14500	Т	Horizontal and Vertical	2M50G7W	52.76	24.8			

	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	
entii	rety.)	
	Digital Video, and Data	

## FREQUENCY COORDINATION

E28. Antenna Id		Frequency Limits(MHz)	Range of Satellite Arc Eastern/West	Station Azimuth Angle	Antenna Elevation Angle Eastern Limit	E58. Earth Station Azimuth Angle Western Limit	E59. Antenna Elevation Angle Western Limit	E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)
R12	Geostationary	11700 12200	60.0/143.0	90.0	5.0	180.0	5.0	0.0

## REMOTE CONTROL POINT LOCATION

E61. Call Sign	E66. Phone Number			
NOTE: Please enter the callsign of the controcallsign for which this application is being filed.				
E62. Street Address				
E63. City	E68. County		E67/68. State/Country	E64. Zip Code

Location	of	Earth	Station	Site
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E1: Site Identifier: YAC E5. Call Sign: E070068

E2: Contact Name Ron Quinn E6. Phone 360–686–3065

Number:

E3. Street: 604 E. Hoag St. E7. City: Yacolt

E8. County: Clark

E4. State WA E9. Zip Code 98675

E10. Area of Operation: CONUS, AK, HI, PR, VI

E11. Latitude: 45 °51 '43.0 "N

E12. Longitude: 122 °23 '46.0 "W

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

E14. Site Elevation (AMSL): 216.0 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.

E16. If the proposed antenna(s) do not operate in the Fixed Satellite Set Satellite Service (FSS) with non–geostationary satellites, do(es) the progain patterns specified in Section 25.209(a2) and (b) as demonstrated by measurements?	oposed antenna(s) comply with the antenna	<b>o</b> Yes	O No	● N/A
E17. Is the facility operated by remote control? If YES, provide the loc point.	ation and telephone number of the control	O Yes	•	No
E18. Is frequency coordination required? If YES, attach a frequency co	ordination report as	O Yes	•	No
E19. Is coordination with another country required? If YES, attach the coordination contours as	name of the country(ies) and plot of	O Yes	•	No
E20. FAA Notification – (See 47 CFR Part 17 and 47 CFR part 25.1 have you attached a copy of a completed FCC Form 854 and/or the FA the structure to aviation?  FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL APPLICATION.	A's study regarding the potential hazard of	O Yes	•	No
POINTS OF COMMUNICATION		·		
Satellite Name: PERMITTED LIST   If you selected OTHER, ple	ease enter the following:			
E21. Common Name:	E22. ITU Name:			
E23. Orbit Location:	E24. Country:			
POINTS OF COMMUNICATION (Destination Points)	•			
E25. Site Identifier: YAC				

E26. Common Name:	E27. Country: USA

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size <meters></meters>	E41/42. Antenna Gain Transmint and/or Recieve (dBi atGHz)
YAC	R17	3000	Channel Master	TYPE 960	0.96	39.7 dBi at 11.95
YAC	R17	3000	Channel Master	TYPE 960	0.96	41.2 dBi at 14.25

Id	Diameter		, ,	Height Above Ground Level	Input Power at antenna flange	E39. Maximum Antenna Height Above Rooftop (meters)	EIRP for al
R17	0.96/0.96	1.5	0.0	0.0	14.0	0.0	52.66

	E43/44. Frequency Bands (MHz)	E45. T/R Mode			E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
R17	11700 12200	R	Horizontal and Vertical	156KG7W	0.0	0.0

E50. Modulation entirety.)	n and Services (If the	ne complete description	on does not appear in	this box, please go t	o the end of the form	to view it in its			
Digital V	ideo, and Data								
R17	11700 12200	R	Horizontal and Vertical	2M50G7W	0.0	0.0			
E50. Modulation entirety.)  Digital V	ideo, and Data				o the end of the form				
R17	14000 14500	Т	Horizontal and Vertical	156KG7W	43.11	27.2			
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 entirety.)  Digital Video, and Data									
R17	14000 14500	Т	Horizontal and Vertical	2M50G7W	52.66	24.7			

entirety.)  Digital	. Video, and	d Data			•			
FREQUENCY	COORDINA	TION						
E28. Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits(MHz)	E54/55. Range of Satellite Arc Eastern/West ern Limit	E56. Earth Station Azimuth Angle Eastern Limit	E57. Antenna Elevation Angle Eastern Limit	E58. Earth Station Azimuth Angle Western Limit	E59. Antenna Elevation Angle Western Limit	E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)
R17	Geostationary	11700	60.0/143.0	90.0	5.0	180.0	5.0	0.0

## REMOTE CONTROL POINT LOCATION

Geostationary

12200

14000 14500

E61. Call Sign		E66. Phone Number		
NOTE: Please enter the callsign of the contro callsign for which this application is being filed.				
E62. Street Address				
E63. City	E68. County		E67/68. State/Country	E64. Zip Code

90.0

60.0/143.0

5.0

5.0

180.0

0.0

Location of Earth Station Site E1: Site Identifier: YAC E070068 E5. Call Sign: E2: Contact Name Ron Quinn E6. Phone 360-686-3065 Number: E3. Street: 604 E. Hoag St. E7. City: Yacolt E8. County: Clark E9. Zip Code E4. State WA 98675 E10. Area of Operation: CONUS, AK, HI, PR, VI 45 °51 '43.0 "N E11. Latitude: E12. Longitude: 122 °23 '46.0 "W E13. Lat/Lon Coordinates are: NAD-27 **⋒** NAD-83 N/A E14. Site Elevation (AMSL): 216.0 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.

E16. If the proposed antenna(s) do not operate in the Fixed Satellite Set Satellite Service (FSS) with non–geostationary satellites, do(es) the progain patterns specified in Section 25.209(a2) and (b) as demonstrated by measurements?	O Yes	O No	<b>⊚</b> N/A	
E17. Is the facility operated by remote control? If YES, provide the loca point.	O Yes	0	No	
E18. Is frequency coordination required? If YES, attach a frequency co	ordination report as	O Yes	•	No
E19. Is coordination with another country required? If YES, attach the coordination contours as	O Yes	•	No	
E20. FAA Notification – (See 47 CFR Part 17 and 47 CFR part 25.1 have you attached a copy of a completed FCC Form 854 and/or the FAZ the structure to aviation?  FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL APPLICATION.	O Yes	•	No	
POINTS OF COMMUNICATION				-
Satellite Name: PERMITTED LIST   If you selected OTHER, ple	ease enter the following:			
E21. Common Name:	E22. ITU Name:			
E23. Orbit Location: E24. Country:				
POINTS OF COMMUNICATION (Destination Points)	•			
E25. Site Identifier: YAC				

E26. Common Name:	E27. Country: USA

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size <meters></meters>	E41/42. Antenna Gain Transmint and/or Recieve (dBi atGHz)	
YAC	R18	3000	Patriot	TX- INT100KUG	1.0	41.9 dBi at 14.25	
YAC	R18	3000	Patriot	TX- INT100KUG	1.0	40.2 dBi at 11.725	

E28. Antenna Id			,	Height Above Ground Level	Input Power at	E39. Maximum Antenna Height Above Rooftop (meters)	EIRP for al
R18	1.0/1.0	2.0	0.0	0.0	14.0	0.0	53.36

	E43/44. Frequency Bands (MHz)	E45. T/R Mode			E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
R18	11700 12200	R	Horizontal and Vertical	156KG7W	0.0	0.0

E50. Modulation entirety.)	and Services (If the	ne complete description	on does not appear in	this box, please go t	o the end of the form	to view it in its
	deo, and Data					
R18	11700 12200	R	Horizontal and Vertical	2M50G7W	0.0	0.0
entirety.)  Digital Vi	ideo, and Data				o the end of the form	
R18	14000 14500	Т	Horizontal and Vertical	156KG7W	43.81	27.9
E50. Modulation entirety.)  Digital Vi	a and Services (If the land Services)	ne complete description	on does not appear in	this box, please go t	o the end of the form	to view it in its
R18	14000 14500	Т	Horizontal and Vertical	2M50G7W	53.36	25.4

E50. Modula entirety.)	ntion and Service	es (If the com	plete description	does not appear	in this box, plea	se go to the end	of the form to vi	ew it in its
Digital	Video, and							
E28. Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits(MHz)	E54/55. Range of Satellite Arc Eastern/West ern Limit	E56. Earth Station Azimuth Angle Eastern Limit	E57. Antenna Elevation Angle Eastern Limit	E58. Earth Station Azimuth Angle Western Limit	E59. Antenna Elevation Angle Western Limit	E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)
R18	Geostationary	11700	60.0/143.0	90.0	5.0	180.0	5.0	0.0

## REMOTE CONTROL POINT LOCATION

Geostationary 14000 14500

E61. Call Sign		E66. Phone Number		
NOTE: Please enter the callsign of the control callsign for which this application is being filed.				
E62. Street Address				
E63. City	E68. County		E67/68. State/Country	E64. Zip Code

90.0

5.0

180.0

5.0

0.0

60.0/143.0

Location of Earth Station Site E1: Site Identifier: YAC E070068 E5. Call Sign: E2: Contact Name Ron Quinn E6. Phone 360-686-3065 Number: E3. Street: 604 E. Hoag St. E7. City: Yacolt E8. County: Clark E9. Zip Code E4. State WA 98675 E10. Area of Operation: CONUS, AK, HI, PR, VI 45 °51 '43.0 "N E11. Latitude: E12. Longitude: 122 °23 '46.0 "W E13. Lat/Lon Coordinates are: NAD-27 **⋒** NAD-83 N/A E14. Site Elevation (AMSL): 213.0 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.

E16. If the proposed antenna(s) do not operate in the Fixed Satellite Set Satellite Service (FSS) with non–geostationary satellites, do(es) the progain patterns specified in Section 25.209(a2) and (b) as demonstrated by measurements?	<b>o</b> Yes	O No	● N/A	
E17. Is the facility operated by remote control? If YES, provide the loc point.	ation and telephone number of the control	O Yes	•	No
E18. Is frequency coordination required? If YES, attach a frequency co	ordination report as	O Yes	•	No
E19. Is coordination with another country required? If YES, attach the coordination contours as	name of the country(ies) and plot of	O Yes	•	No
E20. FAA Notification – (See 47 CFR Part 17 and 47 CFR part 25.1 have you attached a copy of a completed FCC Form 854 and/or the FA the structure to aviation?  FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL APPLICATION.	O Yes	•	No	
POINTS OF COMMUNICATION		·		
Satellite Name: PERMITTED LIST   If you selected OTHER, ple	ease enter the following:			
E21. Common Name:	E22. ITU Name:			
E23. Orbit Location:	E24. Country:			
POINTS OF COMMUNICATION (Destination Points)	•			
E25. Site Identifier: YAC				

E26. Common Name:	E27. Country: USA

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size <meters></meters>	E41/42. Antenna Gain Transmint and/or Recieve (dBi atGHz)
YAC	R21	3000	Prodelin	1984	0.98	39.8 dBi at 11.95
YAC	R21	3000	Prodelin	1984	0.98	41.3 dBi at 14.25

Id	Diameter		, ,	Height Above	Input Power at antenna flange		EIRP for al
R21	0.98/0.98	2.0	0.0	0.0	14.0	0.0	52.76

	E43/44. Frequency Bands (MHz)	E45. T/R Mode			E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
R21	11700 12200	R	Horizontal and Vertical	1565G7W	0.0	0.0

E50. Modulation entirety.)	on and Services (	If the complete d	lescription does not appear	in this box, please	go to the end of th	ne form to view it in	its		
Digital V	Video, and Dat	ta							
R21	14000 14500	R	Horizontal and Vertical	2M50G7W	0.0	0.0			
entirety.)	on and Services (		lescription does not appear		<b>50 00 1110 0110</b> 01 11				
R21	14000 14500	Т	Horizontal and Vertical	156KG7W	43.21	27.3			
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 entirety.)  Digital Video, and Data									
R21	14000 14500	Т	Horizontal and Vertical	2M50G7W	52.76	24.8			

E50. Modula entirety.)	ation and Service	es (If the com	plete description	does not appear	in this box, plea	se go to the end	of the form to vi	ew it in its
	Video, and							
E28. Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits(MHz)	E54/55. Range of Satellite Arc Eastern/West ern Limit	E56. Earth Station Azimuth Angle Eastern Limit	E57. Antenna Elevation Angle Eastern Limit	E58. Earth Station Azimuth Angle Western Limit	E59. Antenna Elevation Angle Western Limit	E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)

90.0

90.0

5.0

5.0

180.0

180.0

5.0

5.0

0.0

0.0

60.0/143.0

60.0/143.0

### REMOTE CONTROL POINT LOCATION

Geostationary

Geostationary 11700 12200

> 14000 14500

E61. Call Sign		E66. Phone Number		
NOTE: Please enter the callsign of the control callsign for which this application is being filed.				
E62. Street Address				
E63. City	E68. County		E67/68. State/Country	E64. Zip Code

R21

# 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: YAC E070068 E5. Call Sign: E2: Contact Name Ron Quinn E6. Phone 360-686-3065 Number: E3. Street: 604 E Hoag St E7. City: Yacolt E8. County: Clark E9. Zip Code E4. State WA 98675 E10. Area of Operation: CONUS, AK, HI, PR, VI 45 °51 '43.0 "N E11. Latitude: E12. Longitude: 122 °23 '46.0 "W E13. Lat/Lon Coordinates are: NAD-27 **⋒** NAD-83 N/A E14. Site Elevation (AMSL): 213.0 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.

E16. If the proposed antenna(s) do not operate in the Fixed Satellite Set Satellite Service (FSS) with non–geostationary satellites, do(es) the progain patterns specified in Section 25.209(a2) and (b) as demonstrated by measurements?	oposed antenna(s) comply with the antenna	O Yes	O No	<b>⊚</b> N/A
E17. Is the facility operated by remote control? If YES, provide the loca point.	ation and telephone number of the control	o Yes	•	No
E18. Is frequency coordination required? If YES, attach a frequency coordination	ordination report as	O Yes	•	No
E19. Is coordination with another country required? If YES, attach the coordination contours as	name of the country(ies) and plot of	o Yes	•	No
E20. FAA Notification – (See 47 CFR Part 17 and 47 CFR part 25.1 have you attached a copy of a completed FCC Form 854 and/or the FAZ the structure to aviation?  FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL APPLICATION.	A's study regarding the potential hazard of	O Yes	•	No
POINTS OF COMMUNICATION				
Satellite Name: PERMITTED LIST   If you selected OTHER, ple	ease 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	E31. Model	E32. Antenna Size <meters></meters>	E41/42. Antenna Gain Transmint and/or Recieve (dBi atGHz)
YAC	YAC-HUB2	2	Vertex/RSI	9.0M	9.0	58.5 dBi at 11.725
YAC	YAC-HUB2	2	Vertex/RSI	9.0M	9.0	60.1 dBi at 14.125
YAC	R24	1000	TracStar	1200	1.2	42.0 dBi at 11.85
YAC	R24	1000	TracStar	1200	1.2	43.2 dBi at 14.125
YAC	R25	1000	TracStar	1800	1.8	45.1 dBi at 11.85
YAC	R25	1000	TracStar	1800	1.8	46.7 dBi at 14.125
YAC	R26	1000	Cobham	5120	1.2	41.4 dBi at 11.85
YAC	R26	1000	Cobham	5120	1.2	42.9 dBi at 14.125

YAC	R27	1000	Cobham	7120	1.2	42.0 dBi at 11.85
YAC	R27	1000	Cobham	7120	1.2	43.0 dBi at 14.125
YAC	R28	5000	Skyware Global	756	0.75	37.6 dBi at 12
YAC	R28	5000	Skyware Global	756	0.75	39.1 dBi at 14.3

E28. Antenna Id	E33/34. Diameter Minor/Major (meters)	E35. Above Ground Level (meters)	Level(meters)	Height Above	E38. Total Input Power at antenna flange (Watts)	E39. Maximum Antenna Height Above Rooftop (meters)	EIRP for al
YAC-HUB2	9.0/9.0	10.0	224.0	0.0	400.0	0.0	86.1
R24	1.2/1.2	3.0	0.0	0.0	14.0	0.0	54.66
R25	1.8/1.8	3.0	0.0	0.0	14.0	0.0	58.16
R26	1.2/1.2	3.0	0.0	0.0	14.0	0.0	54.36
R27	1.2/1.2	3.0	0.0	0.0	14.0	0.0	54.46
R28	0.75/0.75	3.0	0.0	0.0	14.0	0.0	50.56

## FREQUENCY

	E43/44. Frequency Bands (MHz)			Designator	EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
YAC-HUB2	11700 12200	R	Horizontal and Vertical	156KG7W	0.0	0.0

E50. Modulation	and Services (If the	ne complete description	on does not appear in	this box, please go to	o the end of the form	to view it in its
entirety.)	(11 11		on does not appear in	tins con, prouse go t	0 410 4110 01 4110 101111	VO
Digital Vi	deo and Data					
YAC-HUB2	11700 12200	R	Horizontal and Vertical	36M0G7W	0.0	0.0
E50. Modulation entirety.)  Digital Vi	deo and Data	,		, , , , , , , , , , , , , , , , , , ,	o the end of the form	
YAC-HUB2	14000 14500	Т	Horizontal and Vertical	156KG7W	62.0	46.1
E50. Modulation entirety.)	and Services (If the	ne complete description	on does not appear in	this box, please go to	o the end of the form	to view it in its
Digital Vi	deo and Data					
YAC-HUB2	14000 14500	Т	Horizontal and Vertical	36M0G7W	85.6	46.1

E50. Modulati entirety.)	on and Services	(If the complete of	lescription does not appear i	n this box, please	go to the end of the	he form to view it in	its
Digital	Video and Dat	a					
R24	11700 12200	R	Horizontal and Vertical	150KG7D	0.0	0.0	
entirety.)  Digital	Video and Dat	_	lescription does not appear i	•			
R24	11700 12200	R	Horizontal and Vertical	2M43G7D	0.0	0.0	
entirety.)	on and Services Video and Dat	· •	lescription does not appear i	n this box, please	go to the end of the	he form to view it in	its
R24	14000 14500	Т	Horizontal and Vertical	150KG7D	44.93	29.2	

E50. Modulation	on and Services (	If the complete d	escription does not appear i	n this box, please	go to the end of th	ne form to view it in its	
entirety.)		_		-			
Digital N	ideo and Data	a					
R24	14000 14500	Т	Horizontal and Vertical	2M43G7D	54.66	26.83	
entirety.)	on and Services (		escription does not appear i	ii uns box, picase	go to the end of the	ic form to view it in its	
R25	11700 12200	R	Horizontal and Vertical	150KG7D	0.0	0.0	
E50. Modulation entirety.)	on and Services (	If the complete d	escription does not appear i	n this box, please	go to the end of the	ne form to view it in its	
Digital N	Video and Data	a					
R25	11700 12200	R	Horizontal and Vertical	2M43G7D	0.0	0.0	

E50. Modulat entirety.)	ion and Services	(If the complete de	escription does not appear i	n this box, please	go to the end of th	ne form to view it in	its
Digital	Video and Dat	a					
R25	14000 14500	Т	Horizontal and Vertical	150KG7D	48.43	32.7	
entirety.)  Digital	Video and Dat	a					
R25	14000 14500	Т	Horizontal and Vertical	2M43G7D	58.16	27.99	
entirety.)	ion and Services Video and Dat	· •	escription does not appear i	n this box, please	go to the end of th	ne form to view it in	its
R26	11700 12200	R	Horizontal and Vertical	150KG7D	0.0	0.0	

E50. Modulatio	on and Services (	If the complete of	lescription does not appear i	n this box please	go to the end of th	ne form to view it in i	its
entirety.)	in una services	ir the complete c	escription does not appear	in this con, prease	go to the end of th		
Digital V	ideo and Data	1					
R26	11700 12200	R	Horizontal and Vertical	2M43G7D	0.0	0.0	
entirety.)  Digital V	ideo and Data		lescription does not appear i				
R26	14000 14500	Т	Horizontal and Vertical	150KG7D	44.63	28.9	
E50. Modulation entirety.)	on and Services (1	If the complete of	lescription does not appear i	n this box, please	go to the end of th	ne form to view it in i	its
Digital V	ideo and Data	n e e e e e e e e e e e e e e e e e e e					
R26	14000 14500	Т	Horizontal and Vertical	2M43G7D	54.36	26.53	

E50. Modulat entirety.)	tion and Services	(If the complete d	escription does not appear i	n this box, please	go to the end of t	he form to view it in	its
Digital	Video and Dat	a					
R27	11700 12200	R	Horizontal and Vertical	150KG7D	0.0	0.0	
Digital	Video and Dat	a					
R27	11700 12200	R	Horizontal and Vertical	2M43G7D	0.0	0.0	
entirety.)	tion and Services  Video and Dat	· •	escription does not appear i	n this box, please	go to the end of t	he form to view it in	nits
R27	14000 14500	Т	Horizontal and Vertical	150KG7D	44.73	29.0	

E50. Modular entirety.)	tion and Services	(If the complete d	escription does not appear	in this box, please	go to the end of the	he form to view it in	its
Digital	Video and Dat	a					
R27	14000 14500	Т	Horizontal and Vertical	2M43G7D	54.46	26.63	
entirety.)  Digital	Video and Dat	a					
R28	11700 12200	R	Horizontal and Vertical	192KG7D	0.0	0.0	
entirety.)	tion and Services  Video and Dat		escription does not appear	in this box, please	go to the end of the	he form to view it in	its
R28	11700 12200	R	Horizontal and Vertical	950KG7D	0.0	0.0	

E50. Modulation entirety.)	and Services (I	f the complete de	scription does not appear	in this box, please	go to the end of th	ne form to view it in its
Digital Vi	deo and Data					
R28	14000 14500	Т	Horizontal and Vertical	192KG7D	41.29	25.1
Digital Vi	deo and Data					
R28	14000 14500	Т	Horizontal and Vertical	950KG7D	48.24	25.1
E50. Modulation entirety.)  Digital Vi	and Services (I	f the complete de	scription does not appear	in this box, please	go to the end of th	ne form to view it in its

FREQUENCY COORDINATION

E28. Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits(MHz)	E54/55. Range of Satellite Arc Eastern/West ern Limit	E56. Earth Station Azimuth Angle Eastern Limit	E57. Antenna Elevation Angle Eastern Limit	E58. Earth Station Azimuth Angle Western Limit	E59. Antenna Elevation Angle Western Limit	E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)
YAC-HUB2	Geostationary	11700 12200	60.0/143.0	90.0	5.0	270.0	5.0	0.0
	Geostationary	14000 14500	60.0/143.0	90.0	5.0	270.0	5.0	0.0
R24	Geostationary	11700 12200	60.0/143.0	90.0	5.0	270.0	5.0	0.0
	Geostationary	14000 14500	60.0/143.0	90.0	5.0	270.0	5.0	0.0
R25	Geostationary	11700 12200	60.0/143.0	90.0	5.0	270.0	5.0	0.0
	Geostationary	14000 14500	60.0/143.0	90.0	5.0	270.0	5.0	0.0
R26	Geostationary	11700 12200	60.0/143.0	90.0	5.0	270.0	5.0	0.0
	Geostationary	14000 14500	60.0/143.0	90.0	5.0	270.0	5.0	0.0
R27	Geostationary	11700 12200	60.0/143.0	90.0	5.0	270.0	5.0	0.0
	Geostationary	14000 14500	60.0/143.0	90.0	5.0	270.0	5.0	0.0

REMOTE CONTROL POINT LOCATION

E61. Call Sign	E66. Phone Number			
NOTE: Please enter the callsign of the controcallsign for which this application is being filed.				
E62. Street Address				
E63. City	E68. County		E67/68. State/Country	E64. Zip Code

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