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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

1–8. Legal Name of Applicant

Enter a description of this application to identify it on the main menu:

Mt Jackson VSAT – Add Antennas

| Name: | MCI International Services, Inc. (fka MCI WorldCom | Phone Number: | 817–528–1001 |
|-------|--|---------------|--------------|
|       | International, Inc.)                               |               |              |

DBA Fax Number:

Name:

Street: 600 Hidden Ridge E-Mail: brad.wright@verizon.com

MC

City: Irving State: TX

Country: USA Zipcode: 75038 -

**Attention:** Brad Wright

9–16. Name of Contact Representative

Name: MCI International Services, Inc. Phone Number: 817–528–1001

(fka MCI WorldCom

International, Inc.)

Company: Fax Number:

Street: 600 Hidden Ridge E–Mail: brad.wright@verizon.com

MC

City: Irving State: TX

Country: USA Zipcode: 75038–

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.  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> <li>b14. Modification of Database Entry</li> </ul> |
|--|--|
| ~  | 159. If No, indicate reason for fee exemption (see 47 C.F.R.Section 1.1114).   |
| Other(please explain):  Output  Noncomme   | 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 application enter both fields, if this filing is a modification please enter only the file number: |                      |   |  |  |
|--|--|----------------------|---|--|--|
| (a) Call sign of station:  | (a) Date pending application   | n was filed:         | (b) File number:  |  |  |
| E100123  |  |                      | SESMOD2012062900622                                     |  |  |
|  |  |                      |   |  |  |
| TYPE OF SERVICE  | 1  |                      |   |  |  |
|  | for an authorization to provide  | or use the following | ing 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  | e applicable status. Choose  |                      | applicant, check all that apply.                        |  |  |
| only one.  | on Corrior   |                      | censed satellites                                       |  |  |
| Common Carrier Non–Commo   | JII Calliel  | Using Non–U          | J.S. licensed satellites                                |  |  |
| 23. If applicant is providing INTERNATIO   | ONAL COMMON CARRIER s  | ervice, see instruct | tions regarding Sec. 214 filings. Choose one. Are these |  |  |

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.  | O Yes         | No         |
| 42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued, we coordinated or is in the process of coordinating the space station?  | hat administr | ration has |

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 antennas to the current existing VSAT network. The VSAT network will provide digital video and data services. The new antennas will be used to facilitate customer communication requirements including full-time traffic, back-up services, and disaster

| 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). |

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

| Location of Earth St    | ation Site               |                      |              |       |  |  |
|-------------------------|--------------------------|----------------------|--------------|-------|--|--|
| E1: Site Identifier:    | AND                      | E5. Call Sign:       | E990176      |       |  |  |
| E2: Contact Name        | Fred Detheridge          | E6. Phone<br>Number: | 207–364–7871 |       |  |  |
| E3. Street:             | 494 Roxbury Pond<br>Road | E7. City:            | Andover      |       |  |  |
|                         | Route 120                | E8. County:          | Oxford       |       |  |  |
| E4. State               | ME                       | E9. Zip Code         | 04216        |       |  |  |
| E10. Area of Operation: |                          | CONUS, AK, HI, PI    | R, VI        |       |  |  |
| E11. Latitude:          | 44 °37 '57.3 "N          |                      |              |       |  |  |
| E12. Longitude:         | 70 °41 '56.1 "W          |                      |              |       |  |  |
| E13. Lat/Lon Coord      | linates are:             | <b>O</b> NAD-27      | ● NAD-83     | O N/A |  |  |
| E14. Site Elevation     | (AMSL):                  | 270.0 meters         |              |       |  |  |

| 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 Se 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  | ● N/A |    |
|--|---|-------|-------|----|
| E17. Is the facility operated by remote control? If YES, provide the loca point.   | ntion and telephone number of the control | Yes   | ٥     | 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 recoordination 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 FAA the structure to aviation?  FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL APPLICATION.         | O Yes                                     | •     | No    |    |
| POINTS OF COMMUNICATION  |   | ļ     |       |    |
| Satellite Name: PERMITTED LIST   If you selected OTHER, ple  | ase enter the following:                  |       |       |    |
| E21. Common Name:  | E22. ITU Name:                            |       |       |    |
| E23. Orbit Location:   | E24. Country:                             |       |       |    |
| Satellite Name: PERMITTED LIST   If you selected OTHER, ple  | ase enter the following:                  |       |       | 1  |

| E21. Common Name:                            | E22. ITU Name:                             |
|--|--|
| E23. Orbit Location:                         | E24. Country:                              |
| POINTS OF COMMUNICATION (Destination Points) | •  |
| E25. Site Identifier: AND                    |  |
| E26. Common Name:                            | E27. Country: Puerto Rico                  |
|  |  |
| E25. Site Identifier: AND                    |  |
| E26. Common Name:                            | E27. Country: Puerto Rico                  |
|  |  |
| E25. Site Identifier: AND                    |  |
| E26. Common Name:                            | E27. Country: USA                          |
|  |  |
| E25. Site Identifier: AND                    |  |
| E26. Common Name:                            | E27. Country: USA                          |
|  |  |
| E25. Site Identifier: AND                    |  |
| E26. Common Name:                            | E27. Country: United States Virgin Islands |
|  |  |
| E25. Site Identifier: AND                    |  |
| E26. Common Name:                            | E27. Country: United States Virgin Islands |
|  |  |

ANTENNA

| Site ID | E28. Antenna<br>Id | E29. Quantity | E30.<br>Manufacturer | E31. Model | E32. Antenna<br>Size <meters></meters> | E41/42. Antenna Gain Transmint and/or Recieve (dBi atGHz) |
|---------|--------------------|---------------|----------------------|------------|--|---|
| AND     | AND-10             | 1             | Vertex               | 6.1KPK     | 6.1                                    | 55.7 dBi at 11.95   |
| AND     | AND-10             | 1             | Vertex               | 6.1KPK     | 6.1                                    | 57.3 dBi at 14.25   |
| AND     | AND-10             | 1             | Vertex               | 6.1KPK     | 6.1                                    | 55.7 dBi at<br>11.95                                      |
| AND     | AND-10             | 1             | Vertex               | 6.1KPK     | 6.1                                    | 57.3 dBi at 14.25   |
| AND     | HUB02              | 2             | Vertex/RSI           | 9.0M       | 9.0                                    | 58.5 dBi at<br>11.725                                     |
| AND     | HUB02              | 2             | Vertex/RSI           | 9.0M       | 9.0                                    | 60.1 dBi at 14.125  |
| AND     | HUB02              | 2             | Vertex/RSI           | 9.0M       | 9.0                                    | 58.5 dBi at 11.725  |
| AND     | HUB02              | 2             | Vertex/RSI           | 9.0M       | 9.0                                    | 60.1 dBi at 14.125  |

| E28. Antenna<br>Id | E33/34.<br>Diameter<br>Minor/Major<br>(meters) | E35. Above<br>Ground Level<br>(meters) | E36. Above Sea<br>Level(meters) | Height Above | E38. Total<br>Input Power at<br>antenna flange<br>(Watts) | E39. Maximum<br>Antenna Height<br>Above Rooftop<br>(meters) | EIRP for al |
|--------------------|--|--|---------------------------------|--------------|---|---|-------------|
| AND-10             | 6.1/6.1  | 8.0                                    | 250.0                           | 0.0          | 400.0   | 0.0   | 83.3        |
| AND-10             | 6.1/6.1  | 8.0                                    | 250.0                           | 0.0          | 400.0   | 0.0   | 83.3        |
| HUB02              | 9.0/9.0  | 20.0                                   | 250.0                           | 0.0          | 400.0   | 0.0   | 86.1        |
| HUB02              | 9.0/9.0  | 20.0                                   | 250.0                           | 0.0          | 400.0   | 0.0   | 86.1        |

## FREQUENCY

|        | E43/44.<br>Frequency Bands<br>(MHz) | E45.<br>T/R<br>Mode |                            |         | E48. Maximum<br>EIRP per Carrier<br>(dBW) | E49. Maximum<br>ERIP Density per<br>Carrier<br>(dBW/4kHz) |
|--------|-------------------------------------|---------------------|----------------------------|---------|---|---|
| AND-10 | 11700<br>12200                      | R                   | Horizontal and<br>Vertical | 150KG7D | 0.0                                       | 0.0   |

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

| AND-10 | 11700 | R | Horizontal and | 9M75G7D | 0.0 | 0.0 |
|--------|-------|---|----------------|---------|-----|-----|
|        | 12200 |   | Vertical       |         |     |     |

| E50. Modulation                       | 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          |                         |                            |                       |                       |                   |
| AND-10                                | 14000<br>14500         | Т                       | Horizontal and<br>Vertical | 1M20G7D               | 68.07                 | 43.3              |
| entirety.)  Digital V                 | ideo and Data          |                         |                            | 71 C                  | o the end of the form |                   |
| AND-10                                | 14000<br>14500         | Т                       | Horizontal and<br>Vertical | 36M0G7D               | 82.84                 | 43.3              |
| E50. Modulation entirety.)  Digital V | 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 |
| AND-10                                | 11700<br>12200         | R                       | Horizontal and<br>Vertical | 150KG7D               | 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.)                             | and services (if the | ie complete description | on does not appear in      | tins con, pieuse go t  | o the cha of the form | to view it in its |
| Digital Vi                             | deo and Data         |                         |                            |                        |                       |                   |
| AND-10                                 | 11700<br>12200       | R                       | Horizontal and<br>Vertical | 9M75G7D                | 0.0                   | 0.0               |
| E50. Modulation entirety.)  Digital Vi | deo and Data         |                         |                            | , mas con, p.cust go t | o the end of the form |                   |
| AND-10                                 | 14000<br>14500       | Т                       | Horizontal and Vertical    | 1M20G7D                | 68.07                 | 43.3              |
| 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.        |                         |                            |                        |                       |                   |
| AND-10                                 | 14000<br>14500       | Т                       | Horizontal and<br>Vertical | 36M0G7D                | 82.84                 | 43.3              |

| E50. Modulation entirety.)             | and Services (If the | e complete description | on does not appear in      | this box, please go to | o the end of the form | to view it in its |
|--|----------------------|------------------------|----------------------------|------------------------|-----------------------|-------------------|
|  | deo and Data         |                        |                            |                        |                       |                   |
| HUB02                                  | 11700<br>12200       | R                      | Horizontal and<br>Vertical | 9M75G7D                | 0.0                   | 0.0               |
| entirety.)  Digital Vi                 | deo and Data         |                        |                            |                        |                       |                   |
| HUB02                                  | 11700<br>122000      | R                      | Horizontal and<br>Vertical | 150KG7D                | 0.0                   | 0.0               |
| E50. Modulation entirety.)  Digital Vi | and Services (If the | e complete description | on does not appear in      | this box, please go to | o the end of the form | to view it in its |
| HUB02                                  | 14000<br>14500       | Т                      | Horizontal and<br>Vertical | 36M0G7D                | 85.64                 | 46.1              |

| E50. Modulation entirety.)             | and Services (If th  | e 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         |                        |                            |                        |                       |                   |
| HUB02                                  | 14000<br>15500       | T                      | Horizontal and<br>Vertical | 1M20G7D                | 70.87                 | 46.1              |
| entirety.)  Digital Vi                 | deo and Data         |                        |                            |                        |                       |                   |
| HUB02                                  | 11700<br>12200       | R                      | Horizontal and<br>Vertical | 150KG7D                | 0.0                   | 0.0               |
| E50. Modulation entirety.)  Digital Vi | and Services (If the | e complete description | on does not appear in      | this box, please go to | o the end of the form | to view it in its |
| HUB02                                  | 11700<br>12200       | R                      | Horizontal and<br>Vertical | 9M75G7D                | 0.0                   | 0.0               |

| E50. Modulation entirety.)             | and Services (If | the complete descri | ption does not appear      | in this box, please | go to the end of the | e form to view it in its |
|--|------------------|---------------------|----------------------------|---------------------|----------------------|--------------------------|
|  | deo and Data     |                     |                            |                     |                      |                          |
| HUB02                                  | 14000<br>14500   | Т                   | Horizontal and<br>Vertical | 1M20G7D             | 70.87                | 46.1                     |
| Digital Vi                             | deo and Data     |                     |                            |                     |                      |                          |
| HUB02                                  | 14000<br>14500   | Т                   | Horizontal and<br>Vertical | 36M0G7D             | 85.64                | 46.1                     |
| E50. Modulation entirety.)  Digital Vi | and Services (If | the complete descri | ption does not appear      | in this box, please | go to the end of the | e form to view it in its |

FREQUENCY COORDINATION

| E28.<br>Antenna Id | E51. Satellite<br>Orbit Type | E52/53.<br>Frequency<br>Limits(MHz) | E54/55.<br>Range of<br>Satellite Arc<br>Eastern/West<br>ern Limit | E56. Earth<br>Station<br>Azimuth<br>Angle<br>Eastern Limit | E57.<br>Antenna<br>Elevation<br>Angle<br>Eastern Limit | E58. Earth<br>Station<br>Azimuth<br>Angle<br>Western<br>Limit | E59. Antenna Elevation Angle Western Limit | E60.<br>Maximum<br>EIRP Density<br>toward the<br>Horizon<br>(dBW/4kHz) |
|--------------------|------------------------------|-------------------------------------|---|--|--|---|--|--|
| AND-10             | Geostationary                | 11700<br>12200                      | 60.0/143.0  | 90.0   | 5.0  | 270.0   | 5.0  | 0.0  |
|                    | Geostationary                | 14000<br>14500                      | 60.0/143.0  | 90.0   | 5.0  | 270.0   | 5.0  | 0.0  |
|                    | Geostationary                | 11700<br>12200                      | 60.0/143.0  | 90.0   | 5.0  | 270.0   | 5.0  | 0.0  |
|                    | Geostationary                | 14000<br>14500                      | 60.0/143.0  | 90.0   | 5.0  | 270.0   | 5.0  | 0.0  |
| HUB02              | Geostationary                | 11700<br>12200                      | 60.0/143.0  | 90.0   | 5.0  | 270.0   | 5.0  | 0.0  |
|                    | Geostationary                | 14000<br>14500                      | 60.0/143.0  | 90.0   | 5.0  | 270.0   | 5.0  | 0.0  |
|                    | Geostationary                | 11700<br>12200                      | 60.0/143.0  | 90.0   | 5.0  | 270.0   | 5.0  | 0.0  |
|                    | Geostationary                | 14000<br>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 controlling station, not the callsign for which this application is being filed. |                   |

| E62. Street Address |             |                          |               |
|---------------------|-------------|--------------------------|---------------|
| E63. City           | E68. County | E67/68.<br>State/Country | E64. Zip Code |

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

| Location of Earth St        | ation Site              |                       |                 |       |  |  |  |
|-----------------------------|-------------------------|-----------------------|-----------------|-------|--|--|--|
| E1: Site Identifier:        | MJS                     | E5. Call Sign:        | E100123         |       |  |  |  |
| E2: Contact Name            | Scott Foster            | E6. Phone<br>Number:  | 540-477-3022    |       |  |  |  |
| E3. Street:                 | 1295 Industrial<br>Park | E7. City:             | Quicksburg      |       |  |  |  |
|                             |                         | E8. County:           | Shenandoah      |       |  |  |  |
| E4. State                   | VA                      | E9. Zip Code          | 22847           |       |  |  |  |
| E10. Area of Operat         | tion:                   | CONUS, AK, HI, PR, VI |                 |       |  |  |  |
| E11. Latitude:              | 38 °43 '45.4 "N         |                       |                 |       |  |  |  |
| E12. Longitude:             | 78 °39 '25.1 "W         |                       |                 |       |  |  |  |
| E13. Lat/Lon Coord          | linates are:            | <b>○</b> NAD-27       | <b>●</b> NAD-83 | O N/A |  |  |  |
| E14. Site Elevation (AMSL): |                         | 280.0 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. | Yes   | 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 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   | O 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 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: MJS  |   |       |      |
| E26. Common Name:  | E27. Country: Puerto Rico                   |       |      |
| E25. Site Identifier: MJS  |   |       |      |
| E26. Common Name:  | E27. Country: USA                           |       |      |

| E25. Site Identifier: MJS |  |
|---------------------------|--|
| E26. Common Name:         | E27. Country: United States Virgin Islands |

## ANTENNA

| Site ID | E28. Antenna<br>Id | E29. Quantity | E30.<br>Manufacturer | E31. Model | E32. Antenna<br>Size <meters></meters> | E41/42. Antenna Gain Transmint and/or Recieve (dBi atGHz) |
|---------|--------------------|---------------|----------------------|------------|--|---|
| MJS     | HUB02              | 3             | Vertex/RSI           | 9.0M       | 9.0                                    | 58.5 dBi at 11.725  |
| MJS     | HUB02              | 3             | Vertex/RSI           | 9.0M       | 9.0                                    | 60.1 dBi at<br>14.125                                     |

| Id    | Diameter |      | ` /   | Height Above | Input Power at | E39. Maximum<br>Antenna Height<br>Above Rooftop<br>(meters) | EIRP for al |
|-------|----------|------|-------|--------------|----------------|---|-------------|
| HUB02 | 9.0/9.0  | 20.0 | 250.0 | 0.0          | 400.0          | 0.0   | 86.1        |

# FREQUENCY

|       |                | E45.<br>T/R<br>Mode |                            |         | E48. Maximum<br>EIRP per Carrier<br>(dBW) | E49. Maximum<br>ERIP Density per<br>Carrier<br>(dBW/4kHz) |
|-------|----------------|---------------------|----------------------------|---------|---|---|
| HUB02 | 11700<br>12200 | R                   | Horizontal and<br>Vertical | 150KG7D | 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 |
|--|----------------------|-------------------------|----------------------------|------------------------|-----------------------|-------------------|
|  | deo and Data         |                         |                            |                        |                       |                   |
| HUB02                                  | 11700<br>12200       | R                       | Horizontal and<br>Vertical | 9M75G7D                | 0.0                   | 0.0               |
| entirety.)  Digital Vi                 | deo and Data         |                         |                            |                        |                       |                   |
| HUB02                                  | 1400 14500           | Т                       | Horizontal and<br>Vertical | 36M0G7D                | 85.64                 | 46.1              |
| 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 |
| HUB02                                  | 14000<br>14500       | Т                       | Horizontal and<br>Vertical | 1M20G7D                | 70.87                 | 46.1              |

| entirety.)                | ation and Servic                           |                                    | p   | does not appear  | o, p.o   |   |  |  |
|---------------------------|--|------------------------------------|---|--|--|---|--|--|
| FREQUENCY E28. Antenna Id | Y COORDINA<br>E51. Satellite<br>Orbit Type | ΓΙΟΝ E52/53. Frequency Limits(MHz) | E54/55.<br>Range of<br>Satellite Arc<br>Eastern/West<br>ern Limit | E56. Earth<br>Station<br>Azimuth<br>Angle<br>Eastern Limit | E57.<br>Antenna<br>Elevation<br>Angle<br>Eastern Limit | E58. Earth<br>Station<br>Azimuth<br>Angle<br>Western<br>Limit | E59. Antenna Elevation Angle Western Limit | E60.<br>Maximum<br>EIRP Density<br>toward the<br>Horizon<br>(dBW/4kHz) |
| HUB02                     | Geostationary                              | 11700<br>12200                     | 60.0/143.0  | 90.0   | 5.0  | 270.0   | 5.0  | 0.0  |
|                           | Geostationary                              | 14000<br>14500                     | 60.0/143.0  | 90.0   | 5.0  | 270.0   | 5.0  | 0.0  |
| REMOTE CO                 | NTROL POIN                                 | T LOCATION                         | •   | •  |  | '   | •  |  |
| callsign for wh           | ase enter the calls ich this applicati     |                                    |   |  | . Phone Number   |   |  |  |
| E62. Street               | Address                                    |                                    |   |  |  | l ====  |  |  |
| E63. City                 |  |                                    | E68. County   | У  |  | E67/68.<br>State/Country                                      |  | E64. 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: 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? | <b>O</b> Yes              | O No  | <b>⊚</b> N/A |    |  |
|---|---------------------------|-------|--------------|----|--|
| E17. Is the facility operated by remote control? If YES, provide the loca point.  | Yes                       | 0     | 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   | 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)  | 1                         |       |              |    |  |
| E25. Site Identifier: YAC   |                           |       |              |    |  |

| E26. Common Name:         | E27. Country: | Puerto Rico                  |
|---------------------------|---------------|------------------------------|
|                           |               |                              |
| E25. Site Identifier: YAC |               |                              |
| E26. Common Name:         | E27. Country: | USA                          |
|                           | •             |                              |
| E25. Site Identifier: YAC |               |                              |
| E26. Common Name:         | E27. Country: | United States Virgin Islands |

## ANTENNA

| Site ID | E28. Antenna<br>Id | E29. Quantity | E30.<br>Manufacturer | E31. Model | E32. Antenna<br>Size <meters></meters> | E41/42. Antenna Gain Transmint and/or Recieve (dBi atGHz) |
|---------|--------------------|---------------|----------------------|------------|--|---|
| YAC     | HUB01              | 1             | Andrew               | ES76K-1    | 7.6                                    | 57.4 dBi at 11.7  |
| YAC     | HUB01              | 1             | Andrew               | ES76K-1    | 7.6                                    | 59.0 dBi at<br>14.25                                      |
| YAC     | HUB02              | 2             | Vertex/RSI           | 9.0M       | 9.0                                    | 58.5 dBi at<br>11.725                                     |
| YAC     | HUB02              | 2             | Vertex/RSI           | 9.0M       | 9.0                                    | 60.1 dBi at<br>14.125                                     |

| E28. Antenna<br>Id |         |      | ` ′   | Height Above<br>Ground Level | Input Power at | E39. Maximum<br>Antenna Height<br>Above Rooftop<br>(meters) | EIRP for al |
|--------------------|---------|------|-------|------------------------------|----------------|---|-------------|
| HUB01              | 7.6/7.6 | 10.0 | 250.0 | 0.0                          | 400.0          | 0.0   | 85.0        |
| HUB02              | 9.0/9.0 | 20.0 | 250.0 | 0.0                          | 400.0          | 0.0   | 86.1        |

## FREQUENCY

|       | E43/44.<br>Frequency Bands<br>(MHz) | E45.<br>T/R<br>Mode |                            |         | E48. Maximum<br>EIRP per Carrier<br>(dBW) | E49. Maximum<br>ERIP Density per<br>Carrier<br>(dBW/4kHz) |
|-------|-------------------------------------|---------------------|----------------------------|---------|---|---|
| HUB01 | 11700<br>12200                      | R                   | Horizontal and<br>Vertical | 150KG7D | 0.0                                       | 0.0   |

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

| HUB01 | 11700 | R | Horizontal and | 9M75G7D | 0.0 | 0.0 |
|-------|-------|---|----------------|---------|-----|-----|
|       | 12200 |   | Vertical       |         |     |     |

| 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 Vi  | deo and Data   |                        |                            |                        |                     |                   |  |
| HUB01   | 14000<br>14500   | Т                      | Horizontal and<br>Vertical | 1M20G7D                | 69.77               | 45.0              |  |
| E50. Modulation entirety.)  | and Services (If th  | e complete description | on does not appear in      | this box, please go to | the end of the form | to view it in its |  |
| Digital Vi  | deo and Data   |                        |                            |                        |                     |                   |  |
| HUB01   | 14000<br>14500   | Т                      | Horizontal and<br>Vertical | 36M0G7D                | 84.54               | 45.0              |  |
| E50. Modulation entirety.)  | 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 Vi  | deo and Data   |                        |                            |                        |                     |                   |  |
| HUB02   | 11700<br>12200   | R                      | Horizontal and<br>Vertical | 9M75G7D                | 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 |
|--|----------------------|-------------------------|----------------------------|------------------------|-----------------------|-------------------|
|  | deo and Data         |                         |                            |                        |                       |                   |
| HUB02                                  | 11700<br>122000      | R                       | Horizontal and<br>Vertical | 150KG7D                | 0.0                   | 0.0               |
| Digital Vi                             | deo and Data         |                         |                            |                        |                       |                   |
| HUB02                                  | 14000<br>14500       | Т                       | Horizontal and<br>Vertical | 1M20G7D                | 70.87                 | 46.1              |
| 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 |
| HUB02                                  | 14000<br>14500       | Т                       | Horizontal and<br>Vertical | 36M0G7D                | 85.64                 | 46.1              |

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

## FREQUENCY COORDINATION

| E28.<br>Antenna Id | E51. Satellite<br>Orbit Type | E52/53.<br>Frequency<br>Limits(MHz) | E54/55.<br>Range of<br>Satellite Arc<br>Eastern/West<br>ern Limit | E56. Earth<br>Station<br>Azimuth<br>Angle<br>Eastern Limit | E57.<br>Antenna<br>Elevation<br>Angle<br>Eastern Limit | E58. Earth<br>Station<br>Azimuth<br>Angle<br>Western<br>Limit | E59.<br>Antenna<br>Elevation<br>Angle<br>Western<br>Limit | E60. Maximum EIRP Density toward the Horizon (dBW/4kHz) |
|--------------------|------------------------------|-------------------------------------|---|--|--|---|---|---|
| HUB01              | Geostationary                | 11700<br>12200                      | 60.0/143.0  | 90.0   | 5.0  | 270.0   | 5.0   | 0.0   |
|                    | Geostationary                | 14000<br>14500                      | 60.0/143.0  | 90.0   | 5.0  | 270.0   | 5.0   | 0.0   |
| HUB02              | Geostationary                | 11700<br>12200                      | 60.0/143.0  | 90.0   | 5.0  | 270.0   | 5.0   | 0.0   |
|                    | Geostationary                | 14000<br>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 controlling station, not the callsign for which this application is being filed. |                   |

| E62. Street Address |             |                          |               |
|---------------------|-------------|--------------------------|---------------|
| E63. City           | E68. County | E67/68.<br>State/Country | E64. 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: PLNO E5. Call Sign:

E2: Contact Name Gary Neirynck E6. Phone 972–578–7100

Number:

E3. Street: 1901 10th Street E7. City: Plano

Suite 100 E8. County: Collin

E4. State TX E9. Zip Code 75074

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

E11. Latitude: 33 °0 '47.0 "N

E12. Longitude: 96 °41 '13.0 "W

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

E14. Site Elevation (AMSL): 200.0 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. | <b>⊚</b> Yes | 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 Yes        | 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.   | Yes          | ٥    | No           |
| E18. Is frequency coordination required? If YES, attach a frequency coordination report as   | Т            |      |              |
| E16. Is frequency coordination required? If TE3, attach a frequency coordination report as   | O Yes        | •    | No           |
| E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as   | O Yes        | •    | 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 Yes        | •    | No           |
| POINTS OF COMMUNICATION  | -            |      |              |
| Satellite Name: PERMITTED LIST   If you selected OTHER, please enter the following:  |              |      |              |

| E21. Common N     | Name:              |                 |                      | E22. ITU Name:                             |  |   |  |  |
|-------------------|--------------------|-----------------|----------------------|--|--|---|--|--|
| E23. Orbit Loca   | ntion:             |                 |                      | E24. Country:                              |  |   |  |  |
| POINTS OF         | COMMUNICATI        | ON (Destination | Points)              |  |  |   |  |  |
| E25. Site Identit | fier: PLNO         |                 |                      |  |  |   |  |  |
| E26. Common N     | Name:              |                 |                      | E27. Country:                              | Puerto Rico                            |   |  |  |
|                   |                    |                 |                      | •  |  |   |  |  |
| E25. Site Identit | fier: PLNO         |                 |                      |  |  |   |  |  |
| E26. Common Name: |                    |                 |                      | E27. Country: USA                          |  |   |  |  |
|                   |                    |                 |                      |  |  |   |  |  |
| E25. Site Identif | fier: PLNO         |                 |                      |  |  |   |  |  |
| E26. Common N     | Name:              |                 |                      | E27. Country: United States Virgin Islands |  |   |  |  |
| ANTENNA           |                    |                 |                      |  |  |   |  |  |
| Site ID           | E28. Antenna<br>Id | E29. Quantity   | E30.<br>Manufacturer | E31. Model                                 | E32. Antenna<br>Size <meters></meters> | E41/42. Antenna Gain Transmint and/or Recieve (dBi atGHz) |  |  |
| PLNO              | HUB05              | 1               | GD Satcom            | 6.3M                                       | 6.3                                    | 55.7 dBi at 11.225  |  |  |

6.3M

6.3

GD Satcom

57.5 dBi at 14.125

PLNO

HUB05

| Id    | Diameter |      | ` ′   | Height Above | E38. Total<br>Input Power at<br>antenna flange<br>(Watts) |     | EIRP for al |
|-------|----------|------|-------|--------------|---|-----|-------------|
| HUB05 | 6.3/6.3  | 10.0 | 250.0 | 0.0          | 200.0   | 0.0 | 80.5        |

# FREQUENCY

|       | E43/44.<br>Frequency Bands<br>(MHz) | E45.<br>T/R<br>Mode |                            |         | E48. Maximum<br>EIRP per Carrier<br>(dBW) | E49. Maximum<br>ERIP Density per<br>Carrier<br>(dBW/4kHz) |
|-------|-------------------------------------|---------------------|----------------------------|---------|---|---|
| HUB05 | 11700<br>12200                      | R                   | Horizontal and<br>Vertical | 150KG7D | 0.0                                       | 0.0   |

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

| HUB05 | 11700 | R | Horizontal and | 9M75G7D | 0.0 | 0.0 |
|-------|-------|---|----------------|---------|-----|-----|
|       | 12200 |   | Vertical       |         |     |     |

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

| HUB05                      | 14000<br>14500       | Т                     | Horizontal and<br>Vertical | 1M20G7D               | 68.27                 | 43.5              |
|----------------------------|----------------------|-----------------------|----------------------------|-----------------------|-----------------------|-------------------|
| E50. Modulation entirety.) | and Services (If the | ne complete descripti | on does not appear ir      | this box, please go t | o the end of the form | to view it in its |
| Digital Vi                 | deo and Data         |                       |                            |                       |                       |                   |
| HUB05                      | 14000<br>14500       | Т                     | Horizontal and<br>Vertical | 36M0G7D               | 80.49                 | 40.95             |
| E50. Modulation entirety.) |                      | ne complete descripti | on does not appear ir      | this box, please go t | o the end of the form | to view it in its |
| Digital Vi                 | deo and Data         |                       |                            |                       |                       |                   |

# FREQUENCY COORDINATION

|       |               | Frequency<br>Limits(MHz) | Range of<br>Satellite Arc<br>Eastern/West | Station<br>Azimuth<br>Angle | Antenna<br>Elevation<br>Angle<br>Eastern Limit | Station<br>Azimuth<br>Angle |     | E60.<br>Maximum<br>EIRP Density<br>toward the<br>Horizon<br>(dBW/4kHz) |
|-------|---------------|--------------------------|---|-----------------------------|--|-----------------------------|-----|--|
| HUB05 | Geostationary | 11700<br>12200           | 60.0/143.0                                | 90.0                        | 5.0  | 270.0                       | 5.0 | 0.0  |

|               | Geostationary      | 14000<br>14500 | 60.0/143.0 | 90.0   |          | 5.0         | 270.0                       | 5.0 | 0.0           |
|---------------|--------------------|----------------|------------|--------|----------|-------------|-----------------------------|-----|---------------|
| REMOTE CO     | NTROL POIN         | T LOCATION     | •          | •      |          | •           | •                           | •   |               |
| E61. Call Si  | E61. Call Sign     |                |            |        |          |             | mber                        |     |               |
|               | se enter the calls | •              | •          | ot the |          |             |                             |     |               |
| E62. Street A | Address            |                |            | L      |          |             |                             |     |               |
|               |                    |                |            |        |          |             |                             |     |               |
| E63. City     |                    |                | E68. Count | ty     |          |             | E67/68.<br>State/Count      | try | E64. Zip Code |
|               |                    |                |            |        | nnical a | and Operati | ATIONS<br>onal Description) |     |               |

| Location of Earth St | cation Site              |                      |                 |       |  |
|----------------------|--------------------------|----------------------|-----------------|-------|--|
| E1: Site Identifier: | RCH                      | E5. Call Sign:       | E970076         |       |  |
| E2: Contact Name     | Gary Neirynck            | E6. Phone<br>Number: | 972–578–7100    |       |  |
| E3. Street:          | 400<br>INTERNATIONA<br>L | E7. City:            | Richardson      |       |  |
|                      | PARKWAY                  | E8. County:          | Dallas          |       |  |
| E4. State            | TX                       | E9. Zip Code         | 75082           |       |  |
| E10. Area of Operat  | tion:                    | CONUS, AK, HI, P     | R, VI           |       |  |
| E11. Latitude:       | 32 °57 '15.0 "N          |                      |                 |       |  |
| E12. Longitude:      | 96 °42 '25.0 "W          |                      |                 |       |  |
| E13. Lat/Lon Coord   | linates are:             | O NAD-27             | <b>●</b> NAD-83 | O N/A |  |
| E14. Site Elevation  | (AMSL):                  | 200.0 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. | • Yes | 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 Yes | O No | ● N/A |

| E17. Is the facility operated by remote control? If YES, provide the local point.  | tion and telephone number of the control    | Yes   | O No        |
|--|---|-------|-------------|
| E18. Is frequency coordination required? If YES, attach a frequency coo  | ordination report as                        | O Yes | <b>⊚</b> No |
| E19. Is coordination with another country required? If YES, attach the n coordination contours as  | ame of the country(ies) and plot of         | O Yes | No          |
| E20. FAA Notification – (See 47 CFR Part 17 and 47 CFR part 25.11 have you attached a copy of a completed FCC Form 854 and/or the FAA the structure to aviation?  FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL FAPPLICATION. | a's study regarding the potential hazard of | O Yes | No          |
| POINTS OF COMMUNICATION  |   | '     |             |
| Satellite Name: PERMITTED LIST   If you selected OTHER, plea   | ase enter the following:                    |       |             |
| E21. Common Name:  | E22. ITU Name:                              |       |             |
| E23. Orbit Location:   | E24. Country:                               |       |             |
| Satellite Name: PERMITTED LIST   If you selected OTHER, plea   | ase enter the following:                    |       |             |
| E21. Common Name:  | E22. ITU Name:                              |       |             |
| E23. Orbit Location:   | E24. Country:                               |       |             |
| POINTS OF COMMUNICATION (Destination Points)   | 1   |       |             |
| E25. Site Identifier: RCH  |   |       |             |

| E26. Common       | Name:              |               |                      | E27. Country:                              | Puerto Rico                            |   |  |  |
|-------------------|--------------------|---------------|----------------------|--|--|---|--|--|
| E25. Site Ident   | tifier: RCH        |               |                      |  |  |   |  |  |
| E26. Common       | E26. Common Name:  |               |                      |  | Puerto Rico                            |   |  |  |
| E25. Site Ident   | tifier: RCH        |               |                      |  |  |   |  |  |
|                   | E26. Common Name:  |               |                      |  | USA                                    |   |  |  |
| E25. Site Ident   | tifier: RCH        |               |                      |  |  |   |  |  |
| E26. Common Name: |                    |               |                      | E27. Country:                              | v: USA                                 |   |  |  |
| E25. Site Ident   | tifier: RCH        |               |                      |  |  |   |  |  |
| E26. Common       | Name:              |               |                      | E27. Country: United States Virgin Islands |  |   |  |  |
| E25. Site Ident   | tifier: RCH        |               |                      |  |  |   |  |  |
| E26. Common       | Name:              |               |                      | E27. Country: United States Virgin Islands |  |   |  |  |
| ANTENNA           |                    |               |                      | 1  |  |   |  |  |
| Site ID           | E28. Antenna<br>Id | E29. Quantity | E30.<br>Manufacturer | E31. Model                                 | E32. Antenna<br>Size <meters></meters> | E41/42. Antenna Gain Transmint and/or Recieve (dBi atGHz) |  |  |
| RCH               | HUB04              | 1             | GD Satcom            | ES49MPJ-1                                  | 4.9                                    | 53.2 dBi at 11.725  |  |  |

| RCH                     | HUB04  | 1      |                            | GD Sa     | tcom                          | ES49MP.                                       | J-1              | 4.9  |       | 55.1 dBi at 14.275                                       |   |
|-------------------------|--|--------|----------------------------|-----------|-------------------------------|---|------------------|--|-------|--|---|
| E28. Antenna<br>Id      | E33/34.<br>Diameter<br>Minor/Major<br>(meters) |        | Above<br>und Level<br>ers) |           | bove Sea<br>meters)           | E37. Buil<br>Height A<br>Ground I<br>(meters) | bove             | E38. Total<br>Input Powe<br>antenna fla<br>(Watts) |       | E39. Maximum<br>Antenna Heig<br>Above Roofto<br>(meters) | ht EIRP for al  |
| HUB04                   | 4.9/4.9  | 10.0   |                            | 250.0     |                               | 0.0   |                  | 400.0  |       | 0.0  | 81.1  |
| FREQUENCY               | 1  | Į.     |                            | 1         |                               | 1   |                  | 1  |       | <u> </u>   | · ·   |
| E28. Antenna Id         | E43/44.<br>Frequency B<br>(MHz)                |        | E45.<br>T/R<br>M           | ode       | E46. Ant<br>Polarizat<br>L,R) |   | E47. E<br>Design | Emission<br>nator                                  |       | . Maximum<br>P per Carrier<br>W)                         | E49. Maximum<br>ERIP Density per<br>Carrier<br>(dBW/4kHz) |
| HUB04                   | 11700<br>12200                                 |        | R                          |           | Horizonta<br>Vertical         | al and  | 150KC            | G7D  | 0.0   |  | 0.0   |
| E50. Modulat entirety.) | ion and Services                               | (If th | e complete                 | descripti | on does no                    | t appear in                                   | this bo          | x, please go t                                     | o the | end of the form  | to view it in its   |
| Digital                 | Video and Da                                   | ıta    |                            |           |                               |   |                  |  |       |  |   |
| HUB04                   | 11700<br>12200                                 |        | R                          |           | Horizonta<br>Vertical         | al and  | 9M750            | G7D  | 0.0   |  | 0.0   |

| E50. Modulation entirety.)             | and Services (If | the complete descr | ription does not appear    | in this box, please | go to the end of th | e form to view it in its |
|--|------------------|--------------------|----------------------------|---------------------|---------------------|--------------------------|
|  | deo and Data     |                    |                            |                     |                     |                          |
| HUB04                                  | 14000<br>14500   | Т                  | Horizontal and<br>Vertical | 1M20G7D             | 65.87               | 41.1                     |
| Digital Vi                             | deo and Data     |                    |                            |                     |                     |                          |
| HUB04                                  | 14000<br>14500   | Т                  | Horizontal and<br>Vertical | 36M0G7D             | 80.64               | 41.1                     |
| E50. Modulation entirety.)  Digital Vi | and Services (If | the complete descr | ription does not appear    | in this box, please | go to the end of th | e form to view it in its |

FREQUENCY COORDINATION

| E28.<br>Antenna Id | E51. Satellite<br>Orbit Type | E52/53.<br>Frequency<br>Limits(MHz) | E54/55.<br>Range of<br>Satellite Arc<br>Eastern/West<br>ern Limit | E56. Earth<br>Station<br>Azimuth<br>Angle<br>Eastern Limit | Antenna<br>Elevation<br>Angle<br>Eastern Limit | E58. Earth<br>Station<br>Azimuth<br>Angle<br>Western<br>Limit | E59.<br>Antenna<br>Elevation<br>Angle<br>Western<br>Limit | E60. Maximum EIRP Density toward the Horizon (dBW/4kHz) |
|--------------------|------------------------------|-------------------------------------|---|--|--|---|---|---|
| HUB04              | Geostationary                | 11700<br>12200                      | 60.0/143.0  | 90.0   | 5.0  | 270.0   | 5.0   | 0.0   |
|                    | Geostationary                | 14000<br>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 contro callsign for which this application is being filed. |                   |  |                          |               |
| E62. Street Address   |                   |  |                          |               |
|   |                   |  |                          |               |
| E63. City   | E68. County       |  | E67/68.<br>State/Country | E64. Zip Code |

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

| Location of Earth St          | tation Site |                      |          |     |  |  |
|-------------------------------|-------------|----------------------|----------|-----|--|--|
| E1: Site Identifier:          | REMOTE      | E5. Call Sign:       | N/A      |     |  |  |
| E2: Contact Name              | N/A         | E6. Phone<br>Number: | N/A      |     |  |  |
| E3. Street:                   | N/A         | E7. City:            | N/A      |     |  |  |
|                               |             | E8. County:          |          |     |  |  |
| E4. State                     |             | E9. Zip Code         | N/A      |     |  |  |
| E10. Area of Opera            | tion:       | USA, PR, VI          |          |     |  |  |
| E11. Latitude:                | 0 °0 '0.0 " |                      |          |     |  |  |
| E12. Longitude:               | 0 °0 '0.0 " |                      |          |     |  |  |
| E13. Lat/Lon Coordinates are: |             | ○ NAD-27             | O NAD-83 | N/A |  |  |
| E14. Site Elevation (AMSL):   |             | 0.0 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. | <b>●</b> Yes | 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 Yes        | O No | <b>⊗</b> N/A |

| E17. Is the facility operated by remote control? If YES, provide the lepoint.   | ocation and telephone number of the control   | Yes   | O No        |
|---|---|-------|-------------|
| E18. Is frequency coordination required? If YES, attach a frequency   | coordination report as                        | O Yes | <b>●</b> No |
| E19. Is coordination with another country required? If YES, attach the coordination contours as   | ne name of the country(ies) and plot of       | O Yes | No          |
| E20. FAA Notification – (See 47 CFR Part 17 and 47 CFR part 23 have you attached a copy of a completed FCC Form 854 and/or the F the structure to aviation?  FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WIL APPLICATION. | FAA's study regarding the potential hazard of | O Yes | No          |
| POINTS OF COMMUNICATION   |   | •     |             |
| 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: REMOTE  |   |       |             |
| E26. Common Name:   | E27. Country: Puerto Rico                     |       |             |
| E25. Site Identifier: REMOTE  |   |       |             |
| E26. Common Name:   | E27. Country: USA                             |       |             |

| E25. Site Identifier: REMOTE |  |
|------------------------------|--|
| E26. Common Name:            | E27. Country: United States Virgin Islands |

# ANTENNA

| Site ID | E28. Antenna<br>Id | E29. Quantity | E30.<br>Manufacturer | E31. Model | E32. Antenna<br>Size <meters></meters> | E41/42. Antenna Gain Transmint and/or Recieve (dBi atGHz) |  |
|---------|--------------------|---------------|----------------------|------------|--|---|--|
| REMOTE  | R2                 | 3000          | GD Satcom            | 1184       | 1.8                                    | 45.0 dBi at 11.95   |  |
| REMOTE  | R2                 | 3000          | GD Satcom            | 1184       | 1.8                                    | 46.5 dBi at 14.25   |  |
| REMOTE  | R24                | 1000          | TracStar             | 1200       | 1.2                                    | 42.0 dBi at 11.85   |  |
| REMOTE  | R24                | 1000          | TracStar             | 1200       | 1.2                                    | 43.2 dBi at 14.125  |  |
| REMOTE  | R25                | 1000          | TracStar             | 1800       | 1.8                                    | 45.1 dBi at 11.85   |  |
| REMOTE  | R25                | 1000          | TracStar             | 1800       | 1.8                                    | 46.7 dBi at 14.125  |  |
| REMOTE  | R26                | 1000          | Cobham               | 5120       | 1.2                                    | 41.4 dBi at 11.85   |  |
| REMOTE  | R26                | 1000          | Cobham               | 5120       | 1.2                                    | 42.9 dBi at<br>14.125                                     |  |

| REMOTE | R27 | 1000  | Cobham         | 7120 | 1.2  | 42.0 dBi at<br>11.85  |  |
|--------|-----|-------|----------------|------|------|-----------------------|--|
| REMOTE | R27 | 1000  | Cobham         | 7120 | 1.2  | 43.0 dBi at<br>14.125 |  |
| REMOTE | R28 | 5000  | Skyware Global | 756  | 0.75 | 37.6 dBi at 12.0      |  |
| REMOTE | R28 | 5000  | Skyware Global | 756  | 0.75 | 39.1 dBi at 14.3      |  |
| REMOTE | R29 | 100   | Seatel         | 4006 | 1.0  | 39.0 dBi at 12.5      |  |
| REMOTE | R29 | 100   | Seatel         | 4006 | 1.0  | 40.0 dBi at 14.0      |  |
| REMOTE | R30 | 100   | Seatel         | 9711 | 2.4  | 47.3 dBi at 11.7      |  |
| REMOTE | R30 | 100   | Seatel         | 9711 | 2.4  | 49.3 dBi at 14.3      |  |
| REMOTE | R31 | 40000 | GD Satcom      | 1132 | 1.2  | 41.5 dBi at<br>11.95  |  |
| REMOTE | R31 | 40000 | GD Satcom      | 1132 | 1.2  | 43.0 dBi at<br>14.25  |  |

| Id  | Diameter |     | ` ' | Height Above | E38. Total<br>Input Power at<br>antenna flange<br>(Watts) |     | EIRP for al |
|-----|----------|-----|-----|--------------|---|-----|-------------|
| R2  | 1.8/1.8  | 2.5 | 0.0 | 0.0          | 14.0  | 0.0 | 57.96       |
| R24 | 1.2/1.2  | 3.0 | 0.0 | 0.0          | 14.0  | 0.0 | 54.66       |

| R25 | 1.2/1.2 | 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 | 1.2/1.2 | 3.0 | 0.0 | 0.0 | 14.0 | 0.0 | 50.56 |
| R29 | 1.0/1.0 | 2.0 | 0.0 | 0.0 | 14.0 | 0.0 | 51.46 |
| R30 | 2.4/2.4 | 3.0 | 0.0 | 0.0 | 14.0 | 0.0 | 60.76 |
| R31 | 1.2/1.2 | 2.0 | 0.0 | 0.0 | 14.0 | 0.0 | 54.46 |

# FREQUENCY

|    | E43/44.<br>Frequency Bands<br>(MHz) | E45.<br>T/R<br>Mode |                            |         | E48. Maximum<br>EIRP per Carrier<br>(dBW) | E49. Maximum<br>ERIP Density per<br>Carrier<br>(dBW/4kHz) |
|----|-------------------------------------|---------------------|----------------------------|---------|---|---|
| R2 | 11700<br>12200                      | R                   | Horizontal and<br>Vertical | 1M20G7D | 0.0                                       | 0.0   |

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

| R2 | 11700 | R | Horizontal and | 36M0G7D | 0.0 | 0.0 |
|----|-------|---|----------------|---------|-----|-----|
|    | 12200 |   | Vertical       |         |     |     |

| E50. Modulation entirety.)            | n and Services (If t   | he complete descripti | on does not appear in      | this box, please go t | o the end of the form | to view it in its |
|---------------------------------------|--|-----------------------|----------------------------|-----------------------|-----------------------|-------------------|
|                                       | ideo and Data  |                       |                            |                       |                       |                   |
| R2                                    | 14000<br>14500   | Т                     | Horizontal and<br>Vertical | 4M16G7D               | 57.96                 | 27.79             |
| E50. Modulation entirety.)  Digital V | n and Services (If t   | he complete descripti | on does not appear in      | this box, please go t | o the end of the form | to view it in its |
| R2                                    | 14000<br>145000  | Т                     | Horizontal and<br>Vertical | 150KG7D               | 48.23                 | 32.5              |
| E50. Modulation entirety.)  Digital V | n and Services (If the land services) (If the land services) | he complete descripti | on does not appear in      | this box, please go t | o the end of the form | to view it in its |
| R24                                   | 11700<br>12200   | R                     | Horizontal and<br>Vertical | 1M20G7D               | 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 th | ne form to view it in | its |
|---------------------------------------|-------------------|-------------------|------------------------------|--------------------|---------------------|-----------------------|-----|
| Digital V                             | ideo and Data     | a                 |                              |                    |                     |                       |     |
| R24                                   | 11700<br>12200    | R                 | Horizontal and<br>Vertical   | 36M0G7D            | 0.0                 | 0.0                   |     |
| entirety.)  Digital V                 | ideo and Data     |                   | escription does not appear i |                    |                     |                       |     |
| R24                                   | 14000<br>14500    | Т                 | Horizontal and<br>Vertical   | 150KG7D            | 44.93               | 29.2                  |     |
| E50. Modulation entirety.)  Digital V | on and Services ( | •                 | escription does not appear i | n this box, please | go to the end of th | ne form to view it in | its |
| R24                                   | 14000<br>14500    | Т                 | Horizontal and<br>Vertical   | 2M43G7D            | 54.66               | 26.83                 |     |

| E50. Modulation entirety.) | on and Services   | (If the complete d | 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                  |                               |                    |                      |                       |     |
| R25                        | 11700<br>12200    | R                  | Horizontal and<br>Vertical    | 1M20G7D            | 0.0                  | 0.0                   |     |
| entirety.)  Digital v      | Video and Dat     | a                  |                               |                    |                      |                       |     |
| R25                        | 11700<br>12200    | R                  | Horizontal and<br>Vertical    | 36M0G7D            | 0.0                  | 0.0                   |     |
| entirety.)                 | on and Services ( | · •                | lescription does not appear i | n this box, please | go to the end of the | he form to view it in | its |
| R25                        | 14000<br>14500    | Т                  | Horizontal and<br>Vertical    | 150KG7D            | 48.43                | 32.7                  |     |

| E50. Modulation            | n and Services (If t | he complete descripti | on does not appear ir      | n this box, please go t | o the end of the form | to view it in its |
|----------------------------|----------------------|-----------------------|----------------------------|-------------------------|-----------------------|-------------------|
| entirety.)                 | · ·                  | 1 1                   | 11                         | 71 0                    |                       |                   |
| Digital V                  | ideo and Data        |                       |                            |                         |                       |                   |
| R25                        | 14000<br>14500       | Т                     | Horizontal and<br>Vertical | 4M16G7D                 | 58.16                 | 27.99             |
| entirety.)  Digital V      | ideo and Data        |                       |                            |                         | o the end of the form |                   |
| R26                        | 11700<br>12200       | R                     | Horizontal and<br>Vertical | 1M20G7D                 | 0.0                   | 0.0               |
| E50. Modulation entirety.) | n and Services (If t | he complete descripti | 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        |                       |                            |                         |                       |                   |
| R26                        | 11700<br>12200       | R                     | Horizontal and<br>Vertical | 36M0G7D                 | 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.        |                         |                            |                        |                       |                   |
| R26                                    | 14000<br>14500       | Т                       | Horizontal and<br>Vertical | 150KG7D                | 44.63                 | 28.9              |
| E50. Modulation entirety.)  Digital Vi | deo and Data         | ie complete description | on does not appear in      | tilis box, piease go t | o the end of the form | to view it in its |
| R26                                    | 14000<br>14500       | Т                       | Horizontal and<br>Vertical | 2M43G7D                | 54.36                 | 26.53             |
| 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.        |                         |                            |                        |                       |                   |
| R27                                    | 11700<br>12200       | R                       | Horizontal and<br>Vertical | 1M20G7D                | 0.0                   | 0.0               |

| E50. Modulati entirety.)   | 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 |  |
|--|-----------------|--------------------|------------------------------|--------------------|---------------------|-----------------------|-----|--|
| Digital  | Video and Dat   | a                  |                              |                    |                     |                       |     |  |
| R27  | 11700<br>12200  | R                  | Horizontal and<br>Vertical   | 36M0G7D            | 0.0                 | 0.0                   |     |  |
| entirety.)  Digital  | Video and Dat   | a                  |                              |                    |                     |                       |     |  |
| R27  | 14000<br>14500  | Т                  | Horizontal and<br>Vertical   | 150KG7D            | 44.73               | 29.0                  |     |  |
| 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 |                 |                    |                              |                    |                     |                       |     |  |
| R27  | 14000<br>14500  | Т                  | Horizontal and<br>Vertical   | 2M43G7D            | 54.46               | 26.63                 |     |  |

| 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 | he form to view it in | its |
|----------------------------|-------------------|--------------------|------------------------------|--------------------|----------------------|-----------------------|-----|
|                            | Video and Dat     | a                  |                              |                    |                      |                       |     |
| R28                        | 11700<br>12200    | R                  | Horizontal and<br>Vertical   | 1M20G7D            | 0.0                  | 0.0                   |     |
| entirety.)  Digital V      | Video and Dat     | a                  |                              |                    |                      |                       |     |
| R28                        | 11700<br>12200    | R                  | Horizontal and<br>Vertical   | 36M0G7D            | 0.0                  | 0.0                   |     |
| entirety.)                 | on and Services ( |                    | escription does not appear i | n this box, please | go to the end of the | he form to view it in | its |
| R28                        | 14000<br>14500    | Т                  | Horizontal and<br>Vertical   | 192KG7D            | 41.29                | 25.1                  |     |

| E50. Modulation 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 V                             | rideo and Data    | a                  |                               |                    |                      |                       |     |
| R28                                   | 14000<br>14500    | Т                  | Horizontal and<br>Vertical    | 950KG7D            | 48.24                | 25.1                  |     |
| entirety.)  Digital V                 | ideo and Data     | а                  |                               |                    |                      |                       |     |
| R29                                   | 11700<br>12200    | R                  | Horizontal and<br>Vertical    | 1M20G7D            | 0.0                  | 0.0                   |     |
| E50. Modulation entirety.)  Digital V | on and Services ( | •                  | lescription does not appear i | n this box, please | go to the end of the | he form to view it in | its |
| R29                                   | 11700<br>12200    | R                  | Horizontal and<br>Vertical    | 36M0G7D            | 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.        |                         |                            |                        |                       |                   |
| R29                                    | 14000<br>145000      | Т                       | Horizontal and<br>Vertical | 192KG7D                | 42.19                 | 26.0              |
| E50. Modulation entirety.)  Digital Vi | deo and Data         | ne complete description | on does not appear in      | tnis box, piease go to | o the end of the form | to view it in its |
| R29                                    | 14000<br>145000      | Т                       | Horizontal and<br>Vertical | 950KG7D                | 49.14                 | 26.0              |
| 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.        |                         |                            |                        |                       |                   |
| R30                                    | 11700<br>12200       | R                       | Horizontal and<br>Vertical | 1M20G7D                | 0.0                   | 0.0               |

| E50. Modulat            | 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 |
|-------------------------|--------------------|---------------------|------------------------------|---------------------|---------------------|-----------------------|-----|
| entirety.)              | aron una services  | (ii the complete a  | escription does not appear   | in this con, preuse | go to the cha of th |                       | 110 |
| Digital                 | Video and Dat      | a                   |                              |                     |                     |                       |     |
| R30                     | 11700<br>12200     | R                   | Horizontal and<br>Vertical   | 36M0G7D             | 0.0                 | 0.0                   |     |
| entirety.)  Digital     | Video and Dat      | a                   |                              |                     |                     |                       |     |
| R30                     | 14000<br>14500     | Т                   | Horizontal and<br>Vertical   | 150KG7D             | 51.03               | 35.3                  |     |
| 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                   |                              |                     |                     |                       |     |
| R30                     | 14000<br>14500     | Т                   | Horizontal and<br>Vertical   | 9M75G7D             | 60.76               | 26.89                 |     |

| E50. Modulati entirety.) | on and Services   | (If the complete d | escription does not appear i | n this box, please | go to the end of the | he form to view it in | its |
|--------------------------|-------------------|--------------------|------------------------------|--------------------|----------------------|-----------------------|-----|
|                          | Video and Dat     | a                  |                              |                    |                      |                       |     |
| R31                      | 11700<br>12200    | R                  | Horizontal and<br>Vertical   | 150KG7D            | 0.0                  | 0.0                   |     |
| Digital '                | Video and Dat     | a                  |                              |                    |                      |                       |     |
| R31                      | 11700<br>12200    | R                  | Horizontal and<br>Vertical   | 9M75G7D            | 0.0                  | 0.0                   |     |
| entirety.)               | on and Services ( | •                  | escription does not appear i | n this box, please | go to the end of the | he form to view it in | its |
| R31                      | 14000<br>14500    | Т                  | Horizontal and<br>Vertical   | 150KG7D            | 44.73                | 29.0                  |     |

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

| D21 | 14000 | TD. | TT ' . 1 1     | 0) //2C7D | 54.46 | 26.63 |
|-----|-------|-----|----------------|-----------|-------|-------|
| R31 | 14000 | 1   | Horizontal and | 2M43G7D   | 54.46 | 26.63 |
|     | 14500 |     | Vertical       |           |       |       |
|     |       |     |                |           |       |       |

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

# FREQUENCY COORDINATION

| E28.<br>Antenna Id | E51. Satellite<br>Orbit Type | E52/53.<br>Frequency<br>Limits(MHz) | Range of<br>Satellite Arc<br>Eastern/West | E56. Earth<br>Station<br>Azimuth<br>Angle<br>Eastern Limit | E57.<br>Antenna<br>Elevation<br>Angle<br>Eastern Limit | E58. Earth<br>Station<br>Azimuth<br>Angle<br>Western<br>Limit |     | E60.<br>Maximum<br>EIRP Density<br>toward the<br>Horizon<br>(dBW/4kHz) |
|--------------------|------------------------------|-------------------------------------|---|--|--|---|-----|--|
| R2                 | Geostationary                | 11700<br>12200                      | 60.0/143.0                                | 90.0   | 5.0  | 270.0   | 5.0 | 0.0  |
|                    | Geostationary                | 14000<br>14500                      | 60.0/143.0                                | 90.0   | 5.0  | 270.0   | 5.0 | 0.0  |

| R24   | Geostationary | 11700<br>12200 | 60.0/143.0 | 90.0 | 5.0 | 270.0 | 5.0 | 0.0 |
|-------|---------------|----------------|------------|------|-----|-------|-----|-----|
|       | Geostationary | 14000<br>14500 | 60.0/143.0 | 90.0 | 5.0 | 270.0 | 5.0 | 0.0 |
| R25   | Geostationary | 11700<br>12200 | 60.0/143.0 | 90.0 | 5.0 | 270.0 | 5.0 | 0.0 |
|       | Geostationary | 14000<br>14500 | 60.0/143.0 | 90.0 | 5.0 | 270.0 | 5.0 | 0.0 |
| R26   | Geostationary | 11700<br>12200 | 60.0/143.0 | 90.0 | 5.0 | 270.0 | 5.0 | 0.0 |
|       | Geostationary | 14000<br>14500 | 60.0/143.0 | 90.0 | 5.0 | 270.0 | 5.0 | 0.0 |
| R27 C | Geostationary | 11700<br>12200 | 60.0/143.0 | 90.0 | 5.0 | 270.0 | 5.0 | 0.0 |
|       | Geostationary | 14000<br>14500 | 60.0/143.0 | 90.0 | 5.0 | 270.0 | 5.0 | 0.0 |
| R28   | Geostationary | 14000<br>14500 | 60.0/143.0 | 90.0 | 5.0 | 270.0 | 5.0 | 0.0 |
|       | Geostationary | 14000<br>14500 | 60.0/143.0 | 90.0 | 5.0 | 270.0 | 5.0 | 0.0 |
| R29   | Geostationary | 11700<br>12200 | 60.0/143.0 | 90.0 | 5.0 | 270.0 | 5.0 | 0.0 |
|       | Geostationary | 14000<br>14500 | 60.0/143.0 | 90.0 | 5.0 | 270.0 | 5.0 | 0.0 |
| R30   | Geostationary | 11700<br>12200 | 60.0/143.0 | 90.0 | 5.0 | 270.0 | 5.0 | 0.0 |
|       | Geostationary | 14000<br>14500 | 60.0/143.0 | 90.0 | 5.0 | 270.0 | 5.0 | 0.0 |

| R31 | Geostationary | 11700<br>1220  | 60.0/143.0 | 90.0 | 5.0 | 270.0 | 5.0 | 0.0 |
|-----|---------------|----------------|------------|------|-----|-------|-----|-----|
|     | Geostationary | 14000<br>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 contro callsign for which this application is being filed. |                   |  |                          |               |
| E62. Street Address   |                   |  |                          |               |
|   |                   |  |                          |               |
| E63. City   | E68. County       |  | E67/68.<br>State/Country | E64. Zip Code |

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### 43. Description. (Summarize the nature of the application and the services to be provided).

MCI Communications Services, Inc (Verizon) wishes to add an additional VSAT hub and remote antennas to the current existing VSAT network. The VSAT network will provide digital video and data services. The new antennas will be used to facilitate customer communication requirements including full-time traffic, back-up services, and disaster recovery such as hurricanes and other natural disasters as well as terrestrial service outages.