Date & Time Filed: Jun 5 2008 6:11:55:060PM File Number: SES-MOD-INTR2008-01315

FCC APPLICATION FOR SPACE AND EARTH STATION:MOD OR AMD – MAIN FORM	FCC Use Only
FCC 312 MAIN FORM FOR OFFICIAL USE ONLY	

APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu: Modification to add AvL 9066, add satellites, and increase power densities.

-8. Legal Name of	Applicant		
Name:	AvL Technologies	Phone Number:	828-250-9950
DBA Name:		Fax Number:	828-250-9938
Street:	130 Roberts St.	E–Mail:	joliver@avltech.com
City:	Asheville	State:	NC
Country	: USA	Zipcode:	28801 –
Attention	n: Mr James L Oliver		

9–16. Name of Contact Representative

Name: John W. Whetstone **Phone Number:** 207–667–7079

Company: JW Communications **Fax Number:**

Street: 58 Rothry Lane E–Mail: jwhetstone@downeast.net

City: Ellsworth State: ME

Country: USA **Zipcode:** 04605–6330

Attention: Relationship: Engineer

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

(N/A) b1. Application for License of New Station

(N/A) b2. Application for Registration of New Domestic Receive-Only Station

b 3. Amendment to a Pending Application

b4. Modification of License or Registration

b5. Assignment of License or Registration

b6. Transfer of Control of License or Registration

b7. Notification of Minor Modification

(N/A) b8. Application for License of New Receive-Only Station Using Non-U.S. Licensed Satellite

(N/A) b9. Letter of Intent to Use Non-U.S. Licensed Satellite to Provide Service in the United States

(N/A) b10. Other (Please specify)

(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

(N/A) b12. Application for Database Entry

b13. Amendment to a Pending Database Entry Application

b 14. Modification of Database Entry

17c. Is a fee submitted with this application? If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R.Section 1.1114).					
Governmental Entity Noncommercial educational licensee					
Other(please explain):					
17d.					
Fee Classification CGV – Fixed Satellite VSAT 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: E030130	(a) Date pending application was filed:	(b) File number:			
E030130		SESMOD2004022500277			

TYPE OF SERVICE

20. NATURE OF SERVICE: This filing is for an authorization to provide	e or use the following type(s) of service(s): Select all that apply:
a. Fixed Satellite	
b. Mobile Satellite	
c. Radiodetermination Satellite	
d. Earth Exploration Satellite	
e. Direct to Home Fixed Satellite	
f. Digital Audio Radio Service	
g. Other (please specify)	
_	
21. STATUS: Choose the button next to the applicable status. Choose	22. If earth station applicant, check all that apply.
only one.	Using U.S. licensed satellites
Common Carrier Non–Common Carrier	Using Non–U.S. licensed satellites
23. If applicant is providing INTERNATIONAL COMMON CARRIER s facilities:	service, see instructions regarding Sec. 214 filings. Choose one. Are these
O 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 a	pplicable 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 addition	nal 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	
c. 12/14 GHz VSAT Network	
d. Mobile Earth Station	
e. Geostationary Space Station	
f. Non–Geostationary Space Station	
g. Other (please specify)	
26. TYPE OF EARTH STATION FACILITY:	
"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 & tountries)
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

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, aeron aeronautical fixed radio station services are not required to respond to Items 30–34.	autic	al en	ı rou	ite or		
29. Is the applicant a foreign government or the representative of any foreign government?	0	Yes	•	No		
30. Is the applicant an alien or the representative of an alien?	0	Yes	0	No	•	N/A
31. Is the applicant a corporation organized under the laws of any foreign government?	0	Yes	0	No	•	N/A
32. Is the applicant a corporation of which more than one—fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	0	Yes	0	No	•	N/A

 $lackbox{ Yes } lackbox{ No}$

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

33. Is the applicant a corporation directly or indirectly controlled by any other corporation of which more than one–fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	O Yes O	No 👩 N/A
34. If any answer to questions 29, 30, 31, 32 and/or 33 is Yes, attach as an exhibit an identification of the aliens or foreign entities, their nationality, their relationship to the applicant, and the percentage of stock they own or vote.		
BASIC QUALIFICATIONS		
35. Does the Applicant request any waivers or exemptions from any of the Commission's Rules? If Yes, attach as an exhibit, copies of the requests for waivers or exceptions with supporting documents.	o Yes	No
36. Has the applicant or any party to this application or amendment had any FCC station authorization or license revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission? If Yes, attach as an exhibit, an explination of circumstances.	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.	O Yes	⊚ No
38. Has any court finally adjudged the applicant, or any person directly or indirectly controlling the applicant, guilty of unlawfully monopolizing or attemptiing unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement or any other means or unfair methods of competition? If Yes, attach as an exhibit, an explanation of circumstances	O Yes	⊚ No
39. Is the applicant, or any person directly or indirectly controlling the applicant, currently a party in any pending matter referred to in the preceding two items? If yes, attach as an exhinit, an explanation of the circumstances.	O Yes	● 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.	Certification 4	

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 No	
42a. Does the applicant intend to use a non–U.S. licensed satellite to provide service in the United States? If Yes, answer 42b and attach an exhibit providing the information specified in 47 C.F.R. 25.137, as appropriate. If No, proceed to question 43.	Yes No Certification 3	
42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued, what administration has coordinated or is in the process of coordinating the space station?		

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

Applicant requests authority to modify its existing license to add Points of Communication, increase its EIRP Density, and add an antenna. Applicant certifies that its antennas comply with Section 25.209(f). See Attachments Certification 1 and Certification 2.

Certification 1

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.	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.	o c
	Certification 2

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.

O Individual			
 Unincorporated Association 			
Partnership Corporation			
Other (please specify)			
45. Name of Person Signing	46. Title of Person Signing		
James L. Oliver	President		
>			
	ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT 001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION		

(U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

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

Location of Earth S	tation Site							
E1: Site Identifier:	AvL TF 9066	E5. Call Sign:	E030130					
E2: Contact Name	James L. Oliver	E6. Phone Number:	828-250-9950					
E3. Street:		E7. City:						
		E8. County:						
E4. State		E9. Zip Code						
E10. Area of Opera	tion:	CONUS, AK, HI, PR, VI						
E11. Latitude:	0 °0 '0.0"							
E12. Longitude:	0 °0 '0.0"							
E13. Lat/Lon Coord	dinates are:	O 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.

E16. If the proposed antenna(s) do not operate in the Fixed Satellite Ser Satellite Service (FSS) with non–geostationary satellites, do(es) the progain patterns specified in Section 25.209(a2) and (b) as demonstrated by measurements?	posed antenna(s) comply with the antenna	O Yes	O ^{No}	N/A
E17. Is the facility operated by remote control? If YES, provide the loca point.	ntion and telephone number of the control	O Yes	•	No
E18. Is frequency coordination required? If YES, attach a frequency coordination	ordination report as Avl 9066 PAT	O Yes	•	No
E19. Is coordination with another country required? If YES, attach the n 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 FAA the structure to aviation? FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL I APPLICATION.	A's study regarding the potential hazard of	O Yes	•	No
POINTS OF COMMUNICATION		1		
Satellite Name: OTHER OTHER If you selected OTHER, please e	nter the following:			
E21. Common Name: GALAXY 28	E22. ITU Name: GALAXY 28			
E23. Orbit Location: 89.0 W.L.	E24. Country: USA			

Satellite Name: GALAXY III–C | GALAXY III–C | 95 W.L. If you selected OTHER, please enter the following:

E21. Common Name:	E22. ITU Name:			
E23. Orbit Location:	E24. Country:			
Satellite Name: OTHER OTHER If you selected OTHER, please	e enter the following:			
E21. Common Name: GALAXY 10R/GALAXY 18	E22. ITU Name: GALAXY 10R/GALAXY 18			
E23. Orbit Location: 123.0 W.L.	E24. Country: USA			
Satellite Name: AMC 9 AMC 9 83 W.L. If you selected OTHER	, please enter the following:			
E21. Common Name:	E22. ITU Name:			
E23. Orbit Location:	E24. Country:			
	<u>'</u>			
Satellite Name: HORIZONS 2 HORIZONS 2 74.05 DEG If you	selected OTHER, please enter the following:			
E21. Common Name:	E22. ITU Name:			
E23. Orbit Location:	E24. Country:			
Satellite Name: GALAXY XI GALAXY XI 91 W.L. If you select	cted OTHER, please enter the following:			
E21. Common Name:	E22. ITU Name:			
E23. Orbit Location:	E24. Country:			
Satellite Name: GALAXY 26 GALAXY 26 93 W.L. If you select	cted OTHER, please enter the following:			
E21. Common Name:	E22. ITU Name:			
E23. Orbit Location:	E24. Country:			
	•			
Satellite Name: OTHER OTHER If you selected OTHER, please	e enter the following:			

E21. Common Name: GALAXY 25	E22. ITU Name: GALAXY 25
E23. Orbit Location: 97.0 W.L.	E24. Country: USA

Satellite Name: AMC-6 AMC-6 72 W.L.	If you selected OTHER, please enter the following:			
E21. Common Name:		E22. ITU Name:		
E23. Orbit Location:		E24. Country:		

Satellite Name: AMC-4 (formerl GE-4 AMC-4 101 W.L. If yo	selected OTHER, please enter the following:		
E21. Common Name:	E22. ITU Name:		
E23. Orbit Location:	E24. Country:		

POINTS OF COMMUNICATION (Destination Points)

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

ANTENNA

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size <meters></meters>	E41/42. Antenna Gain Transmint and/or Recieve (dBi atGHz)	
AvL TF 9066	TF 9066	50	AvL Technologies	9066 iVSAT	0.0	37.8 dBi at 11.850	
AvL TF 9066	TF 9066	50	AvL Technologies	9066 iVSAT	0.0	39.3 dBi at 14.125	

Id	Diameter		` ′	Height Above	E38. Total Input Power at antenna flange (Watts)		EIRP for al
TF 9066	0.66/0.9	3.0	0.0	0.0	30.84	0.0	54.2

FREQUENCY

E28. Antenna Id	E43/44. Frequency Bands (MHz)	E45. T/R Mode			EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
TF 9066	11700.0000 12200.0000	R	Horizontal and Vertical	5M42G7D	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.)

QPSK Modulation, 6 Mbps, Rate 0.793 Turbo, Digital Carrier

TF 9066	14000.0000	T	Horizontal and	1M09G7D	49.0	25.3
	14500.0000		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.)

QPSK Modulation, 1 Mbps, Rate 0.660 Turbo, Digital Carrier

TF 9066	14000.0000 14500.0000	Т	Horizontal and Vertical	1M81G7D	51.2	25.3		
E50. Modulation entirety.)	and Services (If the	ne complete description	on does not appear in	this box, please go t	o the end of the form	to view it in its		
QPSK Modulation, 2 Mbps, Rate 0.793 Turbo, Digital Carrier								
TF 9066	14000.0000 14500.0000	Т	Horizontal and Vertical	2M71G7D	52.9	25.3		
E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.) QPSK Modulation, 3 Mbps, Rate 0.793 Turbo, Digital Carrier								
TF 9066	14000.0000 14500.0000	Т	Horizontal and Vertical	3M62G7D	54.2	25.3		
E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.) QPSK Modulation, 4 Mbps, Rate 0.793 Turbo, Digital Carrier								

TF 9066	14000.0000	T	Horizontal and	1M64G7D	50.8	25.3
	14500.0000		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.)

QPSK Modulation, 1.5 Mbps, Rate 0.660 Turbo, Digital Carrier

TF 9066	14000.0000	Т	Horizontal and	814KG7D	47.7	25.3
	14500.0000		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.)

QPSK Modulation, 768 kbps, Rate 0.660 Turbo, Digital Carrier

FREQUENCY COORDINATION

E28. Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits(MHz)	Satellite Arc	E56. Earth Station Azimuth Angle Eastern Limit	E57. Antenna Elevation Angle Eastern Limit	E58. Earth Station Azimuth Angle Western Limit	E59. Antenna Elevation Angle Western Limit	E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)
TF 9066	Geostationary	11700.0000 12200.0000	60.0/143.0	0.0	5.0	0.0	5.0	0.0

	Geostationary	14000.0000 14500.0000	60.0/143.0	0.0		5.0	0.0	5.0	-2.4	
REMOTE CONTROL POINT LOCATION										
E61. Call Si	gn				E66	. Phone Num	ber			
	NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed.									
E62. Street	Address									
E63. City	3. City E68. County					E67/68. State/Count	ry	E64. Zip Code	;	
		0		DELL CELL	ELON A		NO.VG			
			ATELLITE EAF rm 312 – Schedi FOF		chnical a	and Operation				

Location of Earth St	ation Site				
E1: Site Identifier:	AvL TF 750E	E5. Call Sign:	E030130		
E2: Contact Name	James L. Oliver	E6. Phone Number:	828-250-9950		
E3. Street:		E7. City:			
		E8. County:			
E4. State		E9. Zip Code			
E10. Area of Operat	tion:	CONUS, AK, HI, P	R, VI		
E11. Latitude:	0 °0 '0.0 "				
E12. Longitude:	0 °0 '0.0 "				
E13. Lat/Lon Coordinates are:		O 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.	O Yes	⊗ 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 loca point.	ation and telephone number of the control	O Yes	No
E18. Is frequency coordination required? If YES, attach a frequency coordination required?	ordination report as ANT PAT 750	O Yes	⊚ No
E19. Is coordination with another country required? If YES, attach the a coordination contours as	name of the country(ies) and plot of	O Yes	No
E20. FAA Notification – (See 47 CFR Part 17 and 47 CFR part 25.1 have you attached a copy of a completed FCC Form 854 and/or the FAZ the structure to aviation? FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL APPLICATION.	A's study regarding the potential hazard of	O Yes	⊚ No
POINTS OF COMMUNICATION			
Satellite Name: HORIZONS 2 HORIZONS 2 74.05 DEG If you see	elected OTHER, please enter the following:		
E21. Common Name:	E22. ITU Name:		
E23. Orbit Location:	E24. Country:		
Satellite Name: GALAXY XI GALAXY XI 91 W.L. If you selecte	d OTHER, please enter the following:		
E21. Common Name:	E22. ITU Name:		
E23. Orbit Location:	E24. Country:		
Satellite Name: GALAXY III-C GALAXY III-C 95 W.L. If you s	relected OTHER, please enter the following:		

Track of the state	The America			
E21. Common Name:	E22. ITU Name:			
E23. Orbit Location:	E24. Country:			
Satellite Name: AMC-6 AMC-6 72 W.L. If you selected OTHER,	please enter the following:			
E21. Common Name:	E22. ITU Name:			
E23. Orbit Location:	E24. Country:			
Satellite Name: AMC-4 (formerl GE-4 AMC-4 101 W.L. If you s	selected OTHER, please enter the following:			
E21. Common Name:	E22. ITU Name:			
E23. Orbit Location:	E24. Country:			
Satellite Name: OTHER OTHER If you selected OTHER, please	enter the following:			
E21. Common Name: GALAXY 28	E22. ITU Name: GALAXY 28			
E23. Orbit Location: 89.0 W.L.	E24. Country: USA			
Satellite Name: GALAXY 26 GALAXY 26 93 W.L. If you selecte	d OTHER, please enter the following:			
E21. Common Name:	E22. ITU Name:			
E23. Orbit Location:	E24. Country:			
Satellite Name: OTHER OTHER If you selected OTHER, please	enter the following:			
E21. Common Name: GALAXY 25 E22. ITU Name: GALAXY 25				
E23. Orbit Location: 97.0 W.L.	E24. Country: USA			
Satellite Name: OTHER OTHER If you selected OTHER, please	enter the following:			

E21. Common Name: GALAXY 10R/GALAXY 18	E22. ITU Name: GALAXY 10R/GALAXY 18
E23. Orbit Location: 123.0 W.L.	E24. Country: USA

Satellite Name: AMC 9 AMC 9 83 W.L. If you selected OTHER, please enter the following:				
E21. Common Name:		E22. ITU Name:		
E23. Orbit Location:		E24. Country:		

POINTS OF COMMUNICATION (Destination Points)

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

ANTENNA

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size <meters></meters>	E41/42. Antenna Gain Transmint and/or Recieve (dBi atGHz)	
AvL TF 750E	TF 750E	50	AvL Technologies	750 iMoVSAT	0.0	37.8 dBi at 11.850	
AvL TF 750E	TF 750E	50	AvL Technologies	750 iMoVSAT	0.0	39.3 dBi at 14.125	

E28. Antenna Id	1		` ′	Height Above	Input Power at	E39. Maximum Antenna Height Above Rooftop (meters)	EIRP for al
TF 750E	0.62/0.89	3.0	0.0	0.0	3.7	0.0	45.0

FREQUENCY

E28. Antenna Id	E43/44. Frequency Bands (MHz)	E45. T/R Mode	E46. Antenna Polarization(H,V, L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
TF 750E	11700.0000 12200.0000	R	Horizontal and Vertical	1M75G7D	0.0	0.0
E50. Modulation entirety.) QPSK Modul	lation, 1024 kk				to the end of the form	to view it in its
TF 750E	14000.0000 14500.0000	Т	Horizontal and Vertical	406KG7D	45.0	25.3
	lation, 256 kbp	os, 312.5 ksps	, 406 kHz B/W,	Digital Carri		
TF 750E	14000.0000 14500.0000	Т	Horizontal and Vertical	203KG7D	42.0	25.3

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

QPSK Modulation, 128 kbps, 156.25 ksps, 203 kHz B/W, Digital Carrier

FREQUENCY COORDINATION

E28. Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits(MHz)	E54/55. Range of Satellite Arc Eastern/West ern Limit	Station Azimuth Angle	E57. Antenna Elevation Angle Eastern Limit	Station Azimuth Angle	E59. Antenna Elevation Angle Western Limit	E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)
TF 750E	Geostationary	11700.0000 12200.0000	60.0/143.0	0.0	5.0	0.0	5.0	0.0
	Geostationary	14000.0000 14500.0000	60.0/143.0	0.0	5.0	0.0	5.0	-2.4

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.	E64. Zip Code
		State/Country	
		/	

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: AvL TF 960 E5. Call Sign: E030130

E2: Contact Name James L. Oliver E6. Phone 828–250–9950

Number:

E3. Street: E7. City:

E8. County:

E4. State E9. Zip Code

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

E11. Latitude: 0 °0 '0.0 "

E12. Longitude: 0 °0 '0.0 "

E13. Lat/Lon Coordinates are: NAD-27 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.	OY	es	⊚ No	01	√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?	OY	es	O No	● ^N	J/A
E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	0 7	Yes	•	No	
E18. Is frequency coordination required? If YES, attach a frequency coordination report as	0 /	Yes	•	No No	
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	0 7	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.	0 7	Yes	•	, No	
POINTS OF COMMUNICATION	-				
Satellite Name: HORIZONS 2 HORIZONS 2 74.05 DEG If you selected OTHER, please enter the following:					

E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:
Satellite Name: GALAXY XI GALAXY XI 91 W.L. If you selected	OTHER, please enter the following:
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:
Satellite Name: GALAXY III-C GALAXY III-C 95 W.L. If you se	lected OTHER, please enter the following:
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:
Satellite Name: OTHER OTHER If you selected OTHER, please en	iter the following:
E21. Common Name: Galaxy 10R/Galaxy 18	E22. ITU Name: Galaxy 10R/Galaxy 18
E23. Orbit Location: 123.0 W.L.	E24. Country: USA
Satellite Name: AMC-4 (formerl GE-4 AMC-4 101 W.L. If you se	lected OTHER, please enter the following:
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:
Satellite Name: OTHER OTHER If you selected OTHER, please en	nter the following:
E21. Common Name: GALAXY 28	E22. ITU Name: GALAXY 28
E23. Orbit Location: 89.0 W.L.	E24. Country: USA
	1
Satellite Name: GALAXY 26 GALAXY 26 93 W.L. If you selected	OTHER, please enter the following:

E21. Common Name: E22. ITU Name:							
E23. Orbit Locati	on:			E24. Country:			
Satellite Name: O'	THER OTHER	If you selected	OTHER, please en	ter the following:			
E21. Common Na	me: GALAXY 25			E22. ITU Name:	GALAXY 25		
E23. Orbit Locati	on: 97.0 W.L.			E24. Country:	USA		
				•			
Satellite Name: A	MC-6 AMC-6 '	72 W.L. If you s	selected OTHER, p	please enter the fol	lowing:		
E21. Common Na	nme:			E22. ITU Name:			
E23. Orbit Locati	on:			E24. Country:			
				•			
Satellite Name: A	MC 9 AMC 9 83	3 W.L. If you se	lected OTHER, ple	ease enter the follo	wing:		
E21. Common Na	ame:			E22. ITU Name:			
E23. Orbit Locati	on:			E24. Country:			
POINTS OF C	OMMUNICATIO	ON (Destination)	Points)	•			
E25. Site Identifie	er:						
E26. Common Na	nme:			E27. Country:			
ANTENNA							
Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size <meters></meters>	E41/42. Antenna Gain Transmint and/or Recieve (dBi atGHz)	

AvL TF 960	TF 960	50	AvL Technologies	960 AvSAT	0.96	39.7 dBi at 11.850	
AvL TF 960	TF 960	50	AvL Technologies	960 AvSAT	0.96	41.2 dBi at 14.125	

Id	Diameter		` ′	Height Above	E38. Total Input Power at antenna flange (Watts)		EIRP for al
TF 960	0.0/0.0	3.0	0.0	0.0	14.9	0.0	52.9

FREQUENCY

	E43/44. Frequency Bands (MHz)				EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
TF 960	11700.0000 12200.0000	R	Horizontal and Vertical	2M15G7D	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.)

QPSK Modulation, 2048 kbps, Rate 3/4, Digital Carrier

TF 960	14000.0000	T	Horizontal and	1M50G7D	52.2	27.2
	14500.0000		Vertical			

E50. Modulati entirety.)	ion and Services (If	the complete de	escription does not appear	in this box, please	go to the end of the	he form to view it in its
QPSK Mod	ulation, 1544 l	kbps, 1500	kHz B/W, Digital (Carrier		
TF 960	14000.0000 14500.0000	Т	Horizontal and Vertical	406KG7D	46.9	27.2
E50. Modulati entirety.)	ion and Services (If	the complete de	escription does not appear	in this box, please	go to the end of the	he form to view it in its
			ksps, 406 kHz B/W,			
TF 960	14000.0000 14500.0000	Т	Horizontal and Vertical	813KG7D	49.9	27.2
entirety.)			escription does not appear			he form to view it in its
TF 960	14000.0000 14500.0000	Т	Horizontal and Vertical	1M63G7D	52.9	27.2

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

QPSK Modulation, 1024 kbps, 1250 ksps, 1625 kHz B/W, Digital Carrier

TF 960	14000.0000	T	Horizontal and	203KG7D	43.9	27.2
	14500.0000		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.)

QPSK Modulation, 128 kbps, 156.25 ksps, 203 kHz B/W, Digital Carrier

FREQUENCY COORDINATION

E28. Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits(MHz)	Range of Satellite Arc Eastern/West	Angle	Antenna Elevation Angle Eastern Limit	E58. Earth Station Azimuth Angle Western Limit	E59. Antenna Elevation Angle Western Limit	E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)
TF 960	Geostationary	11700.0000 12200.0000	60.0/143.0	0.0	5.0	0.0	5.0	0.0

	Geostationary	14000.0000 14500.0000	60.0/143.0	0.0	5.0	0.0	5.0	-2.5	
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	E63. City E68. County E68. County E67/68. State/Country /								
				le B:(Techni		ATIONS ional Description)		

ation Site					
AvL TF 1000	E5. Call Sign:	E030130			
James L. Oliver	E6. Phone Number:	828-250-9950			
	E7. City:				
	E8. County:				
	E9. Zip Code				
tion:	CONUS, AK, HI, P	R, VI			
0 °0 '0.0 "					
0 °0 '0.0 "					
linates are:	NAD-27	O NAD-83	N/A		
(AMSL):	0.0 meters				
	AvL TF 1000 James L. Oliver tion: 0 °0 '0.0 " 0 °0 '0.0 " linates are:	AvL TF 1000 James L. Oliver E6. Phone Number: E7. City: E8. County: E9. Zip Code CONUS, AK, HI, Properties 0 ° 0 ' 0.0 " 0 ° 0 ' 0.0 " linates are: NAD-27	AvL TF 1000 E5. Call Sign: E030130 James L. Oliver E6. Phone 828–250–9950 Number: E7. City: E8. County: E9. Zip Code tion: CONUS, AK, HI, PR, VI 0 °0 '0.0 " 0 °0 '0.0 " linates are: NAD-27 NAD-83	AvL TF 1000 E5. Call Sign: E030130 James L. Oliver E6. Phone 828–250–9950 Number: E7. City: E8. County: E9. Zip Code tion: CONUS, AK, HI, PR, VI 0 °0 '0.0 " 0 °0 '0.0 " linates are: NAD–27 NAD–83 N/A	AvL TF 1000 E5. Call Sign: E030130 James L. Oliver E6. Phone 828–250–9950 Number: E7. City: E8. County: E9. Zip Code tion: CONUS, AK, HI, PR, VI 0 °0 '0.0 " 0 °0 '0.0 " linates are: NAD-27 NAD-83 N/A

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.	O Yes	⊗ 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 loc point.	cation and telephone number of the control	O Yes	No
E18. Is frequency coordination required? If YES, attach a frequency co	pordination 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. have you attached a copy of a completed FCC Form 854 and/or the FA the structure to aviation? FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL APPLICATION.	A's study regarding the potential hazard of	O Yes	No
POINTS OF COMMUNICATION			
Satellite Name: AMC 9 AMC 9 83 W.L. If you selected OTHER,	please enter the following:		
E21. Common Name:	E22. ITU Name:		
E23. Orbit Location:	E24. Country:		
Satellite Name: HORIZONS 2 HORIZONS 2 74.05 DEG If you s	selected OTHER, please enter the following:		
E21. Common Name:	E22. ITU Name:		
E23. Orbit Location:	E24. Country:		
	•		
Satellite Name: GALAXY XI GALAXY XI 91 W.L. If you select	ed OTHER, please enter the following:		

E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:
Satellite Name: GALAXY III–C GALAXY III–C 95 W.L. If	you selected OTHER, please enter the following:
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:
Satellite Name: OTHER OTHER If you selected OTHER, pl	ease enter the following:
E21. Common Name: Galaxy 10R/Galaxy 18	E22. ITU Name: Galaxy 10R/Galaxy 18
E23. Orbit Location: 123.0 W.L.	E24. Country: USA
Satellite Name: OTHER OTHER If you selected OTHER, pl	ease enter the following:
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:
Satellite Name: AMC-4 (formerl GE-4 AMC-4 101 W.L. If	you selected OTHER, please enter the following:
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:
Satellite Name: OTHER OTHER If you selected OTHER, pl	asso enter the following:
E21. Common Name: GALAXY 28	E22. ITU Name: GALAXY 28
E23. Orbit Location: 89.0 W.L.	E24. Country: USA
Satellite Name: GALAXY 26 GALAXY 26 93 W.L. If you so	elected OTHER, please enter the following:

E21. Common Na	nme:			E22. ITU Name:					
E23. Orbit Locati	on:			E24. Country:					
Satellite Name: O'	THER OTHER	If you selected	OTHER, please en	ter the following:					
E21. Common Na	me: GALAXY 25			E22. ITU Name:	GALAXY 25				
E23. Orbit Locati	on: 97.0 W.L.			E24. Country:	USA				
Satellite Name: A	MC-6 AMC-6 '	72 W.L. If you s	selected OTHER, p	please enter the following	lowing:				
E21. Common Na	nme:			E22. ITU Name:					
E23. Orbit Locati	on:			E24. Country:					
Satellite Name: O'	THER OTHER	If you selected	OTHER, please en	ter the following:					
E21. Common Na	ame:			E22. ITU Name:					
E23. Orbit Locati	on:			E24. Country:					
POINTS OF C	OMMUNICATIO	ON (Destination	Points)						
E25. Site Identifie	er:								
E26. Common Na	nme:			E27. Country:					
ANTENNA									
Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size <meters></meters>	E41/42. Antenna Gain Transmint and/or Recieve (dBi atGHz)			

AvL TF 1000	TF 1000	50	AvL Technologies	1000 iSNG	1.0	39.8 dBi at 11.850	
AvL TF 1000	TF 1000	50	AvL Technologies	1000 iSNG	1.0	41.5 dBi at 14.125	

Id	Diameter		` ′	Height Above	E38. Total Input Power at antenna flange (Watts)		EIRP for al
TF 1000	0.0/0.0	3.0	0.0	0.0	27.5	0.0	55.9

FREQUENCY

	E43/44. Frequency Bands (MHz)				E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
TF 1000	14000.0000 14500.0000	Т	Horizontal and Vertical	1M50G7D	52.5	27.5

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.)

QPSK Modulation, 1544 kbps, 1500 kHz B/W, Digital Carrier

TF 1000 1	4000.0000	T	Horizontal and	1M63G7D	53.2	27.5
1	4500.0000		Vertical			

E50. Modula entirety.)	tion and Services (I	f the complete de	escription does not appear	in this box, please	go to the end of t	he form to view it in its		
QPSK Mod	dulation, 1024	kbps, 1625	kHz B/W, Digital (Carrier				
TF 1000	11700.0000 12200.0000	R	Horizontal and Vertical	5M50G7D	0.0	0.0		
E50. Modula entirety.)	tion and Services (I	f the complete de	escription does not appear	in this box, please	go to the end of t	he form to view it in its		
QPSK Mod	dulation, 6 Mbp	s, Rate 0.7	93 Turbo, Digital	Carrier				
TF 1000	14000.0000 14500.0000	Т	Horizontal and Vertical	1M90G7D	54.1	27.5		
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.) QPSK Modulation, 2 Mbps, Rate 3/4, 1.9 MHz B/W, Digital Carrier								
TF 1000	14000.0000 14500.0000	Т	Horizontal and Vertical	2M80G7D	55.9	27.5		

E50. Modula entirety.)	tion and Services (I	f the complete de	escription does not appear	in this box, please	go to the end of the	he form to view it in its
QPSK Mod	dulation, 3 Mbp	s, Rate 3/4	, 2.8 MHz B/W, Dig	gital Carrier		
TF 1000	14000.0000 14500.0000	Т	Horizontal and Vertical	406KG7D	47.2	27.5
E50. Modula entirety.)	tion and Services (I	f the complete de	escription does not appear	in this box, please	go to the end of the	he form to view it in its
QPSK MOO	dulation, 256 K.	OPS, 312.5	ksps, 406 kHz B/W,	Digital Car	rier	
TF 1000	14000.0000 14500.0000	Т	Horizontal and Vertical	813KG7D	50.2	27.5
E50. Modula entirety.)	tion and Services (I	f the complete do	escription does not appear	in this box, please	go to the end of the	he form to view it in its
QPSK Mod	dulation, 512 k	bps, 625 ks	ps, 812.5 kHz B/W,	Digital Car	rier	
TF 1000	14000.0000 14500.0000	Т	Horizontal and Vertical	203KG7D	44.2	27.5

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.)

QPSK Modulation, 128 kbps, 156.25 ksps, 203 kHz B/W, Digital Carrier

FREQUENCY COORDINATION

E28. Antenna Id	E51. Satellite Orbit Type	Limits(MHz)	E54/55. Range of Satellite Arc Eastern/West ern Limit	Station Azimuth Angle	E57. Antenna Elevation Angle Eastern Limit	Station Azimuth Angle	E59. Antenna Elevation Angle Western Limit	E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)
TF 1000	Geostationary	11700.0000 12200.0000	60.0/143.0	0.0	5.0	0.0	5.0	0.0
	Geostationary	14000.0000 14500.0000	60.0/143.0	0.0	5.0	0.0	5.0	-2.99

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.	E64. Zip Code
		State/Country	
		/	

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