Approved by OMB 3060–0678

Date & Time Filed: Jan 10 2017 10:26:33:326AM File Number: SES-MFS-20170110-00016

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 of ESAA License to Add Points of Communication

1–8. Legal Name of Applicant Panasonic Avionics Corporation **Phone Number:** 949-672-2364 Name: DBA **Fax Number:** Name: 26200 Enterprise Way Street: E-Mail: mark.defazio@panasonic.aero City: Lake Forest State: CA USA Zipcode: **Country:** 92630 Attention: Mr. Mark DeFazio

Name of Contac	t Representative		
Name:	Carlos Nalda	Phone Number:	5713325626
Company	: LMI Advisors	Fax Number:	
Street:	2550 M Street NW	E-Mail:	cnalda@lmiadvisors.com
City:	Washington	State:	DC
Country:	USA	Zipcode:	20037-
Attention:	Mr. Carlos Nalda	Relationship:	Other

CLASSIFICATION OF FILING

17. Choose the button next to the classification that applies to this filing for both questions a. and b. Choose only one for 17a and only one for 17b.	 (N/A) b1. Application for License of New Station (N/A) b2. Application for Registration of New Domestic Receive–Only Station b3. Amendment to a Pending Application
 a1. Earth Station a2. Space Station 	 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 b14. Modification of Database Entry

17c. Is a fee submitted with this applicat					
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 • Noncomme	ercial educational licensee				
• Other(please explain):					
17d.					
Fee Classification CGB – Mobile Satellite Earth Stations					
18. If this filing is in reference to an existing station, enter:	19. If this filing is an amendment to a pending modification please enter only the file number	g application enter both fields, if this filing is a r:			
(a) Call sign of station: E100089	(a) Date pending application was filed:	(b) File number:			
		SESMFS2016081900730			

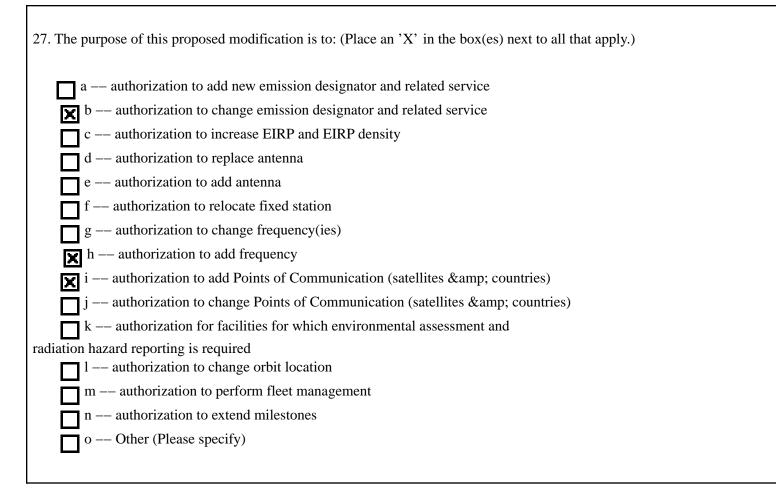
TYPE OF SERVICE

20. NATURE OF SERVICE: This filing is for an authorization to provid	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	Using Non–U.S. licensed satellites
23. If applicant is providing INTERNATIONAL COMMON CARRIER facilities:	service, see instructions 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 a	applicable frequency band(s).
a. C–Band (4/6 GHz) k. Ku–Band (12/14 GHz)	
c.Other (Please specify upper and lower frequencies in MHz.)	
Frequency Lower: Frequency Upper: (Please specify addition	onal 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
O d. Mobile Earth Station
• e. Geostationary Space Station
• f. Non–Geostationary Space Station
• g. Other (please specify) ESAA
26. TYPE OF EARTH STATION FACILITY:
Transmit/Receive Transmit-Only Receive-Only N/A
"For Space Station applications, select N/A."

PURPOSE OF MODIFICATION



ENVIRONMENTAL POLICY

28. Would a Commission grant of any proposal in this application or amendment have a significant environmental impact as defined by 47 CFR 1.1307? If YES, submit the statement as required by Sections 1.1308 and 1.1311 of the Commission's rules, 47 C.F.R. 1.1308 and 1.1311, as an exhibit to this application. A Radiation Hazard Study must accompany all applications for new transmitting facilities, major modifications, or major amendments.	Yes ● No Technical Appendix		х			
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	rou	te or		
29. Is the applicant a foreign government or the representative of any foreign government?	0	Yes	۲	No		
30. Is the applicant an alien or the representative of an alien?	0	Yes	0	No	۲	N/A
31. Is the applicant a corporation organized under the laws of any foreign government?	0	Yes	0	No	۲	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	۲	N/A

33. Is the applicant a corporation directly or indirectly controlled by any other corporation of which more than	0	Yes	o	No	6	N/A
one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign	Ŷ		~		•	
government or representative thereof or by any corporation organized under the laws of a foreign country?						

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 Narrative Statement 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	
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 attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement or any other means or unfair methods of competition? If Yes, attach as an exhibit, an explanation of circumstances	O Yes	● 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	O 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.

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 No

Yes

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? See Narrative Statement

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.)

Modification to add satellite points of communication for the previously licensed SPA and PPA ESAA terminals.

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.	О ^В
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

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.

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

Location of Earth Sta	ation Site					
E1: Site Identifier:	PPA	E5. Call Sign:	E100089			
	Mission Control Center	E6. Phone Number:	425-415-9800			
E3. Street:	26200 Enterprise Way	E7. City:	Lake Forest			
		E8. County:	Orange			
E4. State	CA	E9. Zip Code	92630			
E10. Area of Operation	ion:	U.S. and Internation	nal			
E11. Latitude:	0 °0 '0.0 "					
E12. Longitude:	" 0.0' 0° 0					
E13. Lat/Lon Coord	inates are:	ONAD-27	ONAD-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}
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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 [№]	N/A
E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	• Yes	0	No

E18. Is frequency coordination required? If YES, attach a frequency coordination report as	0	Yes	۲	No
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	0	Yes	۲	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	Yes	۲	No

POINTS OF COMMUNICATION

Satellite Name: AsiaSat 7 AsiaSat 7 105.5 E.L.	If you selected OTHER, please enter the following:
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:

Satellite Name: INTELSAT 33e | INTELSAT 33e | 60.0 E.L. If you selected OTHER, please enter the following:

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

Satellite Name: INTELSAT 33e INTELSAT 33e 60.0 E.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: PPA						
E26. Common Name:	E27. Country: USA					

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

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

ANTENNA

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	Size <meters></meters>	E41/42. Antenna Gain Transmint and/or Recieve (dBi at GHz)
PPA	PPA	1000	Panasonic	PPA	0.89	37.0 dBi at 14.250

E28. Antenna Id	E33/34. Diameter Minor/Major (meters)	E35. Al Ground (meters	d Level		bove Sea meters)	E37. Buil Height A Ground I (meters)	bove	E38. Total Input Powe antenna flar (Watts)		E39. Maximur Antenna Heigl Above Rooftop (meters)	nt EIRP for al
PPA	0.0/0.0	0.0		0.0		0.0		16.0		0.0	48.0
FREQUENCY		•	•					•			
E28. Antenna Id	E43/44. Frequency Ba (MHz)	nds E4	45. ′R Mo	de	E46. Anto Polarizat L,R)		E47. E Design	mission ator		-	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
PPA	10950 11200	R			Horizonta Vertical	l and	48M6C	37D	0.0	0.0 0.0	
PSK											
PPA	10950 11200	R			Horizonta Vertical	l and	54M0C	37D	0.0		0.0
E50. Modulation entirety.) PSK	on and Services	(If the c	complete de	escriptio	on does no	t appear in	this box	x, please go to	o the o	end of the form	to view it in its

PPA	11450 12200	R	Horizontal and Vertical	1M20G7D	0.0	0.0
E50. Modula entirety.)	ation and Services ()	If the complete d	escription does not appear	in this box, please	go to the end of	the form to view it in its
PSK						
PPA	11450 12200	R	Horizontal and Vertical	48M6G7D	0.0	0.0
PSK						
PPA	11450 12200	R	Horizontal and Vertical	54M0G7D	0.0	0.0
E50. Modula entirety.)	ation and Services ()	If the complete d	escription does not appear	in this box, please	go to the end of	the form to view it in its
PSK						

PPA	12500 12600	R	Horizontal and Vertical	1M20G7D	0.0	0.0
E50. Modulat entirety.)	ion and Services (I	f the complete d	escription does not appear	in this box, please	go to the end of	the form to view it in its
PSK						
PPA	12500 12600	R	Horizontal and Vertical	48M6G7D	0.0	0.0
PSK						
PPA	12500 12600	R	Horizontal and Vertical	54M0G7D	0.0	0.0
E50. Modulat entirety.)	ion and Services (I	f the complete d	escription does not appear	in this box, please	go to the end of	the form to view it in its
PSK						

FREQUENCY COORDINATION

E28.	E51. Satellite	E52/53.	E54/55.	E56. Earth	E57.	E58. Earth	E59.	E60.
Antenna Id	Orbit Type	Frequency Limits(MHz)	Satellite Arc Eastern/West		Antenna Elevation Angle Eastern Limit	Station Azimuth Angle Western Limit		Maximum EIRP Density toward the Horizon (dBW/4kHz)
			/					

REMOTE CONTROL POINT LOCATION

E61. Call Sign E100089 NOTE: Please enter the callsign of the contro callsign for which this application is being filed.	E66. Phone Number 4254159800			
E62. Street Address 26200 Enterprise Way				
E63. City Lake Forest	E68. County Orange		E67/68. State/Country CA/ USA	E64. Zip Code 92630

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:	SPA	E5. Call Sign:				
E2: Contact Name	Mission Control Center	E6. Phone Number:	425-415-9800			
E3. Street:	26200 Enterprise Way	E7. City:	Lake Forest			
		E8. County:	Orange			
E4. State	CA	E9. Zip Code	92630			
E10. Area of Opera	tion:	U.S. and Internatio	nal			
E11. Latitude:	0 °0 '0.0 "					
E12. Longitude:	0 °0 '0.0 "					
E13. Lat/Lon Coord	linates are:	O NAD-27	ONAD-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.	• 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 location and telephone number of the control point.		
	• Yes	O No

E18. Is frequency coordination required? If YES, attach a frequency coordination report as	0	Yes	۲	No
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	0	Yes	۲	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	Yes	۲	No

POINTS OF COMMUNICATION

Satellite Name: INTELSAT 33e INTELSAT 33e 60.0 E.L. If yo	ou selected OTHER, please enter the following:
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:

Satellite Name: AsiaSat 7 AsiaSat 7 105.5 E.L. If you selected OT	HER, please enter the following:
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:

Satellite Name: INTELSAT 33e | INTELSAT 33e | 60.0 E.L. If you selected OTHER, please enter the following:

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

Satellite Name: GALAXY 16 GALAXY 16 99 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: SPA					
E26. Common Name:	E27. Country: USA				

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

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

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

ANTENNA

Site ID	E28. Antenna	E29. Quantity	E30.	E31. Model	E32. Antenna	E41/42.
	Id		Manufacturer		Size <meters></meters>	Antenna Gain
						Transmint
						and/or Recieve
						(dBi at
						GHz)

SPA	SPA	1000	Panasonic	SPA	0.949	35.0 dBi at	
						14.250	

E28. Antenna Id	E33/34. Diameter Minor/Major (meters)	E35. Above Ground Level (meters)	· · · ·	Height Above Ground Level	Input Power at	E39. Maximum Antenna Height Above Rooftop (meters)	EIRP for al
SPA	0.0/0.0	0.0	0.0	0.0	10.0	0.0	45.0

FREQUENCY

	E43/44. Frequency Bands (MHz)	E45. T/R Mode			E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
SPA	10950 11200	R	Horizontal and 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.)

QPSK,	8PSK, 16APSK						
SPA	10950 11200	R	Horizontal and Vertical	48M6G7D	0.0	0.0	

E50. Modulation entirety.)	n and Services (If t	he complete descripti	on does not appear i	n this box, please go	to the end of the form	n to view it in its
QPSK, 8PSI	K, 16APSK					
SPA	11450 12200	R	Horizontal and Vertical	48M6G7D	0.0	0.0
E50. Modulation entirety.)	n and Services (If t	he complete descripti	on does not appear i	n this box, please go	to the end of the form	n to view it in its
QPSK, 8PSI	K, 16APSK					
SPA	12500 12600	R	Horizontal and Vertical	1M20G7D	0.0	0.0
E50. Modulation entirety.)	n and Services (If t	he complete descripti	on does not appear i	n this box, please go	to the end of the form	n to view it in its
QPSK, 8PSI	K, 16APSK					
SPA	12500 12600	R	Horizontal and Vertical	48M6G7D	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, 8PSK, 16APSK

SPA	12500 12600	R	Horizontal and Vertical	54M0G7D	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, 8PSK, 16APSK

FREQUENCY COORDINATION

E28.	E51. Satellite	E52/53.	E54/55.	E56. Earth	E57.	E58. Earth	E59.	E60.
Antenna Id	Orbit Type	· · · ·	Satellite Arc Eastern/West	U U	Antenna Elevation Angle Eastern Limit	Station Azimuth Angle Western Limit		Maximum EIRP Density toward the Horizon (dBW/4kHz)
			/					

REMOTE CONTROL POINT LOCATION

E61. Call Sign E100089 NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed.		E66. Phone Number 4254159800		
E62. Street Address 26200 Enterprise Way				
E63. City Lake Forest	E68. County Orange		E67/68. State/Country CA/ USA	E64. Zip Code 92630

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