# FEDERAL COMMUNICATIONS COMMISSION SATELLITE SPACE STATION AUTHORIZATIONS (Technical and Operational Description)

#### S1. GENERAL INFORMATION Complete for all satellite applications.

a. Space Station or Satellite Network Name: LM-RPS-71E	e. Estimated Date of Placement into Service:	i Will the space station(s) operate on a Common Carrier Basis:
b. Construction Commencement Date:	f. Estimated Lifetime of Satellite(s): Years	j. Number of transponders offered on a common carrier basis:
c. Construction Completion Date:	g. Total Number of Transponders:	k. Total Common Carrier Transponder Bandwidth: MHz
d1. Est Launch Date Begin: d2. Est Launch Date End:	h. Total Transponder Bandwidth (no. transponders x Bandwidth) MHz	I. Orbit Type: Mark all boxes that apply:

#### S2. OPERATING FREQUENCY BANDS Identify the frequency range and transmit/receive mode for all frequency bands in which this station will oper Also indicate the nature of service(s) for each frequency band.

	Frequency	Band Limits			
Lower Frequency (_	Lower Frequency (_Hz) Upper Frequency (_Hz)		_Hz)	e. T/R Mode	f. Nature of Service(s): List all that apply to this band
a. Numeric	b. Unit (K/M/G)	c. Numeric	d. Unit (K/M/G)		
6652.3175	Μ	6664.3225	Μ	R	Fixed Satellite Service

#### S3. ORBITAL INFORMATION FOR GEOSTATIONARY SATELLITES ONLY:

a. Nominal Orbital Longitude ( 71 E	Degrees E/W):	b. Alternate Orbital Longitu	ude (Degrees E/W):	c. Reason for orbital location selection:		
Longitudinal Tolerance or E/W d. Toward West: e. Toward East:	1 0		Range of orbital are in whic provided (Optional): g. Westernmost: h. Easternmost:	h adequate serv Degrees	ice can be <u>E/W</u>	
i. Reason for service are s	election (Optional)	:				

Page 2: NGSO Orbits

S4. ORBITAL INFORMATION FOR NON-GEOSTATIONARY SATELLITES ONLY

S4a. Total Number of Satellites in Network or System:

S4b. Total Number of Orbital Planes in Network or System:

S4c. Celestial Reference Body (Earth, Sun, Moon, etc.):

S4d. Orbit Epoch Date:

For each Orbital Plane Provide:

ſ	(e) Orbital	(f) No. of	(g) Inclination	(h) Orbital	(i) Apogee (km)	(j) Perigee (km)	(k) Right Ascension	(I) Argument of	Active Se	rvice Arc Rang	e (Degrees)
	Plane No.	Satellites in	Angle (degrees)	Period			of the Ascending	Perigee	(m) Begin	(n) End	(o) Other
		Plane		(Seconds)			Node (Deg.)	(Degrees)	Angle	Angle	

S5. INITIAL SATELLITE PHASE ANGLE For each satellite in each orbital plane, provide the intital phase angle.

(a) Orbital	(b) Satellite	(c) Initial
Plane No.	Number	Phase Angle
		(Degrees)

**NO NGSO DATA FILED** 

S6. SERVICE AREA CHARACTERISTICS for each service area provide:

(a) Service Area ID	(b) Type of Associated Station (Earth or Space)	(d) Service Area Description. Provide list of geographic areas (state postal codes or ITU 3-ltr codes), satellites or Figure No. of Service Area Diagram.
GBL	S	Visible areas of Earth. XVE

Page 3: Service Areas

Page 4: Antenna Beams

S7. SPACE STATION ANTENNA BEAM CHARACTERISTICS For each antenna beam provide:

(a)	(b)	Isotropic	Antenna	(e)	(f)	(g) Min.	(h) Polar-	(i) Polarization	(j) Service		Transmit				Receive		
Beam ID	T/R Mode		ain (d) Edge	Error	Rotational Error	Cross- Polar Iso-	ization Switch-	Alignment Rel. Equatorial	Area ID	(k) Input	(I) Effective Output	(m) Max.	System	(o) G/T Max.	(p) Min. Saturation	Input Atten (q) Max.	uator (dB) (r) Step
		(dBi)	(dBi)	(Degrees)	(Degrees)	lation (dB)	able? (Y/N)	Plane (Degrees)		Losses (dB)	Power (W)	EIRP (dBW)	Noice Temp (k)		Flux Density (dBW/m2)	Value	Size
CGB	R	11	8	0.15	0.1	30	N	0	GBL				1000	-19			
CGB	R	11	8	0.15	0.1	30	Ν	90	GBL				1000	-19			

Page 5: Beam Diagrams

S8. ANTENNA BEAM DIAGRAMS For each beam pattern provide the reference to the graphic image and numerical data: Also provide the power flux density levels in each beam that result from the emission with the highest power flux density.

(a) Beam	(b) T/R	(c) Co-or Cross	(d) GSO Ref.	(e) NGSO Antenna Gain Contour Description	Gain Contour Data	At Angle of	Max. Power I Arrival above he	Flux Density (dB prizontal (for em	1	hest PFD)
ID	Mode	Polar Mode ("C" or" X")	Orbital Longitude (Deg. E/W)	(Figure/Table/ Exhibit)	(GXT File)	(g) 5 Deg	(h) 10 Deg	(i) 15 Deg	(j) 20 Deg	(k) 25 Deg
CGB	R	С	71		CGBLH 71E.gxt					
CGB	R	С	71		CGBLV 71E.gxt					

Page 6: Channels and Transponders

00.017				on nequency	
(a) Channel No.	(B) Assigned Bandwidth (kHz)	(c) T/R Mode	(d) Center Frequency (MHz)	(e) Polarization (H, V, L, R)	(f) TTC or Comm Channel (T or C)
CU1	5	R	6652.32	Н	С
CU2	5	R	6656.32	Н	С
CU3	5	R	6660.32	Н	С
CU4	5	R	6664.32	Н	С
CU5	5	R	6652.32	V	С
CU6	5	R	6656.32	V	С
CU7	5	R	6660.32	V	С
CU8	5	R	6664.32	V	С

(a)	(b)	Receive	Band	Transmit Band			
Transponder ID	Transponder Gain (dB)	(c) Channel No.	(d) Beam ID	(e) Channel No.	(f) Beam ID		
CU1		CU1	CGBLH				
CU2		CU2	CGBLH				
CU3		CU3	CGBLH				
CU4		CU4	CGBLH				
CU5		CU5	CGBLV				
CU6		CU6	CGBLV				
CU7		CU7	CGBLV				
CU8		CU8	CGBLV				

S9. SPACE STATION CHANNELS For each frequency channel provide: S10. SPACE STATION TRANSPONDERS For each transponder provide:

S11. DIGITAL MODULATION PARAMETERS For each digital emission provide:

(a) Digital Mod. ID	(b) Emission Designator	(c) Assigned Bandwidth (kHz)	(d) No. of Phases	(e)Uncoded Data Rate (kbps)	(f) FEC Error Correction Coding Rate	Processing	(h) Total C/N Performance Objective (dB)	(i) Single Entry C/I Objective (dB)
D1	5K00G7D	5	2	2.5	1		10	22.2

Page 7: Digital Modulation

Page 8: Analog Modulation

S12. ANALOG MODULATION PARAMETERS For each analog emission provide:

(a)	(b) Emission	(c)	(d) Signal	(e)		Multi-channe	l Telephony		(j) Video	(k) Video	(I) Video	(m) SCPC/FM	· · /	() 0
Analog Mod. II		Assigned Bandwidth (kHz)	Туре	Channels per Carrier	(f) Ave. Companded Talker Level (dBm0)	(g) Bottom Baseband Freq. (MHz)	(h) Top Baseband Freq. (MHz)	(i) RMS Modulation Index	Standard NTSC, PAL, etc.	Noise- Weighting (dB)	and SCPC/FM Modulation Index	Compander, Preemphasis, and Noise Weighting (dB)	Performance Objective (dB)	Entry C/I Objective (dB)

Page 9: Typical Emissions

S13. TYPICAL EMISSIONS For each planned type of emission provide:

Associated		Modulation ID		(-)	(f) Carrier	(g)Noise Budget	(h) Energy	Receive Band (Assoc. Transmit Stn)			Transmit Band (This Space Station)			
(a) Start	Transponder ID Range (a) Start (b) End	(C) Digital (Table	(Table (Table S12)	per Transponder	Spacing (kHz)	Reference (Table No.)	Dispersal Bandwidth (kHz)	(i)Assoc. Stn. Max. Antenna Gain (dBi)	Assoc. Station Transmit Power (dBW)		EIRP (dBW)		Power Flux	(o)Assoc. Stn
(1) - 111	(1) 2	S11)							(j) Min.	(k) Max.	(I) Min.	(m) Max.	Density (dBW/m2/Hz)	Rec. G/T (dB/K)
CU1	CU8	D1		1		RPS-Cu LB.doc		59.4	-5.4	-2.4				

Page 10: TT and C

S14. Is the space station(s) controlled and monitored remotely? If Yes, provide the location and telephone number of the TT and C control point(s): #Error

Page 11: Characteristics and Certifications

S15. SPACECRAFT PHYSICAL CHARACTERISTICS:

S16. SPACECRAFT ELECTRICAL CHARACTERISTICS:

S17. CERTIFICATIONS:

a. Are the power flux density limits of § 25.208 met?:	YES	# NO	# N/A					
b. Are the appropriate service area coverage requirements of § 25.143(b)(ii) and (iii), or § 25.145(c)(1) and (2	2) met? YES	# NO	# N/A					
c. Are the frequency tolerances of § 25.202(e) and the out-of-band emission limits of § 25.202(f)(1), (2) and (	(3) met? YES	# NO	# N/A					
In addition to the information required in this Form, the space station applicant is required to provide all the information specified in Section 25.114 of the								
Commission's rules, 47 C.F.R § 25.114.								