# 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: GALAXY 14	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):	i. Number of transponders offered on a common carrier basis:
	Years	,
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)	I. Orbit Type: Mark all boxes that apply:
	MHz	X GSO NGSO

#### 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 (_Hz) Upper Frequency (_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)		

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

a. Nominal Orbital Longitude (Degrees E/W): 125 W	b. Alternate Orbital Longitude (Degrees E/W):	c. Reason for orbital location selection:
Longitudinal Tolerance or E/W Station-Keeping: d. Toward West: 0.05 Degrees e. Toward East: 0.05 Degrees	f. Inclination Excursion or N/S Station-Keeping Tolerance:   Range of orbital are in which adequate service can be provided (Optional):     0.05   Degrees     Easternmost:   h. Easternmost:	
i. Reason for service are selection (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:

	or ITU 3-ltr codes), satellites or Figure No. of
ID Station (Earth or File Name (GXT File) Service Area Diagram.	
Space)	

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 Gain (c) Peak (dBi) Pointing (dBi) Rotational Error (Degrees) Cross- Pointing (Degrees) ization Switch- lation (dB) Alignment Rel. Switch- (Y/N) Area ID (k) Input Losse (dB)	out Output Max. ses Power (W) EIRP	(n) (o) G/T (p) Min. Input Attenuator (dB) System Max. Saturation Noice Gain Pt. Flux Density Temp (k) (db/K) (dBW/m2) (q) Max. (r) Step Size

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)	(b)	(c) Co-or	Ref.	(e) NGSO Antenna Gain	(f) GSO Antenna	Max. Power Flux Density (dBW/M2/Hz)					
Beam	T/R	Cross		Contour Description	Gain Contour Data	At Angle of Arrival above horizontal (for emission with highest PFD)					
ID	Mode	Mode ("C"	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	

Page 5: Beam Diagrams

Page 6: Channels and Transponders

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

(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)
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(a)	(b)	Receive	Band	Transmi	t Band
Transponder	Transponder	(c) Channel	(d) Beam	(e) Channel	(f) Beam ID
ID	Gain (dB)	No.	ID	No.	

S11. DIGITAL MODULATION PARAMETERS For each digital emission provide:

ſ	(a) Digital Mod. ID	(b) Emission Designator	Bandwidth	(d) No. of Phases	Data Rate	(f) FEC Error Correction Coding Rate	Processing	(h) Total C/N Performance Objective (dB)	C/I Objective
			(kHz)		(kbps)	Coding Rate	Gain (dB)	Objective (dB)	(dB

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:

ľ	Associated Transponder ID Range		Modulation ID		(-) ,	· · /	(g)Noise Budget	(h) Energy	Receive Band (Assoc. Transmit Stn)			Transmit Band (This Space Station)			
	(a) Start	(b) End	(c) Digital (Table S11)	(d) Analog (Table S12)	per Transponder	-1-5	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
	. ,									(j) Min.	(k) Max.	(I) Min.	(m) Max.	Density (dBW/m2/Hz)	Rec. G/T (dB/K)

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.							