

**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: SBS 6		e. Estimated Date of Placement into Service:		i. Will the space station(s) operate on a Common Carrier Basis: N	
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: 19		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) 817 MHz		i. Orbit Type: Mark all boxes that apply: <input checked="" type="checkbox"/> GSO <input type="checkbox"/> 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				e. T/R Mode	f. Nature of Service(s): List all that apply to this band
Lower Frequency (Hz)		Upper Frequency (Hz)			
a. Numeric	b. Unit (K/M/G)	c. Numeric	d. Unit (K/M/G)		
14000	M	14500	M	R	Fixed Satellite Service
11700	M	12200	M	T	Fixed Satellite Service

S3. ORBITAL INFORMATION FOR GEOSTATIONARY SATELLITES ONLY:

a. Nominal Orbital Longitude (Degrees E/W): 76.85 W		b. Alternate Orbital Longitude (Degrees E/W):		c. Reason for orbital location selection: Spacecraft will replace the existing Galaxy 4R satellite	
Longitudinal Tolerance or E/W Station-Keeping:		f. Inclination Excursion or N/S Station-Keeping Tolerance:		Range of orbital are in which adequate service can be provided (Optional): Degrees E/W	
d. Toward West:	0.05 Degrees	e. Toward East:		g. Westernmost:	
	0.05 Degrees	1.6 Degrees		h. Easternmost:	
i. Reason for service are selection (Optional):					

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S4. ORBITAL INFORMATION FOR NON-GEOSTATIONARY SATELLITES ONLY

S4a. Total Number of Satellites in Network or System:

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

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

S4d. Orbit Epoch Date:

For each Orbital Plane Provide:

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

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

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

NO NGSO DATA FILED

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S6. SERVICE AREA CHARACTERISTICS for each service area provide:

(a) Service Area ID	(b) Type of Associated Station (Earth or Space)	(c) Service Area Diagram File Name (GXT File)	(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.
1	S		Continental United States
2	S		Global

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

(a) Beam ID	(b) T/R Mode	Isotropic Antenna Gain		(e) Pointing Error (Degrees)	(f) Rotational Error (Degrees)	(g) Min. Cross- Polar Iso- lation (dB)	(h) Polar- ization Switch- able? (Y/N)	(i) Polarization Alignment Rel. Equatorial Plane (Degrees)	(j) Service Area ID	Transmit			Receive			Input Attenuator (dB)	
		(c) Peak (dBi)	(d) Edge (dBi)							(k) Input Losses (dB)	(l) Effective Output Power (W)	(m) Max. EIRP (dBW)	(n) System Noise Temp (k)	(o) G/T Max. Gain Pt. (db/K)	(p) Min. Saturation Flux Density (dBW/m2)	(q) Max. Value	(r) Step Size
KHU	R	36.9	26.9					0	1				9.2	-97.2	14	2	
KVUL	R	36.9	26.9					90	1				9.2	-97.2	14	2	
KHD	T	36.6	26.6					0	1			50.9					
KVDL	T	36.6	26.6					90	1			50.9					
OCM	R	0.5	-1.5					0	2				-37.2	-88			
OTL	T	1.6	-0.4					90	2			12.4					
RCM	R	42.5	32.5					90	1				-2.9	-122			
RTL	T	36.6	26.6					0	1			21.6					

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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 ID	(b) T/R Mode	(c) Co-or Cross Polar Mode ("C" or" X")	(d) GSO Ref. Orbital Longitude (Deg. E/W)	(e) NGSO Antenna Gain Contour Description (Figure/Table/ Exhibit)	(f) GSO Antenna Gain Contour Data (GXT File)	Max. Power Flux Density (dBW/M2/Hz)				
						At Angle of Arrival above horizontal (for emission with highest PFD)				
						(g) 5 Deg	(h) 10 Deg	(i) 15 Deg	(j) 20 Deg	(k) 25 Deg
KHU	R	C	-76.85		khul.gxt					
KVUL	R	C	-76.85		kvul.gxt					
KHD	T	C	-76.85		khd.l.gxt					
KVDL	T	C	-76.85		kvdl.gxt					
OCM	R	C	-76.85		ocmd.gxt					
OTL	T	C	-76.85		otlm.gxt					
RCM	R	C	-76.85	rcmd.pdf						
RTL	T	C	-76.85		rtlm.gxt					

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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)
KU001	43000	R	14025	V	C
KU003	43000	R	14074	V	C
KU005	43000	R	14123	V	C
KU007	43000	R	14172	V	C
KU009	43000	R	14221	V	C
KU011	43000	R	14270	V	C
KU013	43000	R	14319	V	C
KU015	43000	R	14368	V	C
KU017	43000	R	14417	V	C
KU019	43000	R	14466	V	C
KU002	43000	R	14049.5	H	C
KU004	43000	R	14098.5	H	C
KU006	43000	R	14147.5	H	C
KU008	43000	R	14196.5	H	C
KU010	43000	R	14245.5	H	C
KU012	43000	R	14294.5	H	C
KU014	43000	R	14343.5	H	C
KU016	43000	R	14392.5	H	C
KU018	43000	R	14441.5	H	C
KD001	43000	T	11725	H	C
KD003	43000	T	11774	H	C
KD005	43000	T	11823	H	C
KD007	43000	T	11872	H	C
KD009	43000	T	11921	H	C
KD011	43000	T	11970	H	C
KD013	43000	T	12019	H	C
KD015	43000	T	12068	H	C
KD017	43000	T	12117	H	C
KD019	43000	T	12166	H	C
KD002	43000	T	11749.5	V	C

(a) Transponder ID	(b) Transponder Gain (dB)	Receive Band		Transmit Band	
		(c) Channel No.	(d) Beam ID	(e) Channel No.	(f) Beam ID
K0001	119.1	KU001	KVUL	KD001	KHDL
K0003	119.1	KU003	KVUL	KD003	KHDL
K0005	119.1	KU005	KVUL	KD005	KHDL
K0007	119.1	KU007	KVUL	KD007	KHDL
K0009	119.1	KU009	KVUL	KD009	KHDL
K0011	119.1	KU011	KVUL	KD011	KHDL
K0013	119.1	KU013	KVUL	KD013	KHDL
K0015	119.1	KU015	KVUL	KD015	KHDL
K0017	119.1	KU017	KVUL	KD017	KHDL
K0019	119.1	KU019	KVUL	KD019	KHDL
K0002	119.1	KU002	KHUL	KD002	KVDL
K0004	119.1	KU004	KHUL	KD004	KVDL
K0006	119.1	KU006	KHUL	KD006	KVDL
K0008	119.1	KU008	KHUL	KD008	KVDL
K0010	119.1	KU010	KHUL	KD010	KVDL
K0012	119.1	KU012	KHUL	KD012	KVDL
K0014	119.1	KU014	KHUL	KD014	KVDL
K0016	119.1	KU016	KHUL	KD016	KVDL
K0018	119.1	KU018	KHUL	KD018	KVDL

KD004	43000	T	11798.5	V	C
KD006	43000	T	11847.5	V	C
KD008	43000	T	11896.5	V	C
KD010	43000	T	11945.5	V	C
KD012	43000	T	11994.5	V	C
KD014	43000	T	12043.5	V	C
KD016	43000	T	12092.5	V	C
KD018	43000	T	12141.5	V	C
CMD1	6000	R	14003.0	H	T
CMD2	6000	R	14497.0	V	T
TLM1	1000	T	12195	V	T
TLM2	1000	T	12198	V	T
TLM3	1000	T	12195	H	T
TLM4	1000	T	12198	H	T

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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	(g) CDMA Processing Gain (dB)	(h) Total C/N Performance Objective (dB)	(i) Single Entry C/I Objective (dB)
D1	41M9G7W	30800	4	28380	0.5		5.2	12.9
D2	10M3G7W	6771.1	4	6000	0.5		3.9	13.4
D3	100KG7W	75.4	4	64	0.5		3	12.8
D4	1M45G7W	1229	2	512	0.5		3.4	12.7
D5	400KG7W	307	2	128	0.5		3.4	12.7

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S12. ANALOG MODULATION PARAMETERS For each analog emission provide:

(a) Analog Mod. ID	(b) Emission Designator	(c) Assigned Bandwidth (kHz)	(d) Signal Type	(e) Channels per Carrier	Multi-channel Telephony				(j) Video Standard NTSC, PAL, etc.	(k) Video Noise- Weighting (dB)	(l) Video and SCPC/FM Modulation Index	(m) SCPC/FM Compander, Preemphasis, and Noise Weighting (dB)	(n) Total C/N Performance Objective (dB)	(o) Single Entry C/I Objective (dB)
					(f) Ave. Companded Talker Level (dBm0)	(g) Bottom Baseband Freq. (MHz)	(h) Top Baseband Freq. (MHz)	(i) RMS Modulation Index						
A1	36M0F3F	36000	TV/FM	1					NTSC	12.8	2.6		10	21.7

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

Associated Transponder ID Range (a) Start (b) End		Modulation ID		(e) Carriers per Transponder	(f) Carrier Spacing (kHz)	(g) Noise Budget Reference (Table No.)	(h) Energy Dispersal Bandwidth (kHz)	Receive Band (Assoc. Transmit Stn)			Transmit Band (This Space Station)			
		(c) Digital (Table S11)	(d) Analog (Table S12)					(i) Assoc. Stn. Max. Antenna Gain (dBi)	Assoc. Station Transmit Power (dBW)		EIRP (dBW)		(n) Max. Power Flux Density (dBW/m ² /Hz)	(o) Assoc. Stn Rec. G/T (dB/K)
(j) Min.	(k) Max.			(l) Min.	(m) Max.									
K0001	K0019		A1	1		Link Budgets.d	4000	56.9	12.8	22.8	40.9	50.9	-141.2	31
K0001	K0019	D1		1		Link Budgets.d		56.9	-0.7	9.3	34.9	44.9	-156.1	36.6
K0001	K0019	D2		4	10300	Link Budgets.d		56.9	-6.8	3.2	28.3	38.3	-156.1	36.6
K0001	K0019	D3		430	100	Link Budgets.d		56.9	-20	-16.5	8.7	18.7	-156.2	33.1
K0001	K0019	D4		29	1450	Link Budgets.d		56.9	-14.4	-4.4	20.7	30.7	-156.3	33.1
K0001	K0019	D5		107	400	Link Budgets.d		56.9	-20	-10.4	14.7	24.7	-156.3	33.1

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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): Yes

Remote Control (TT C) Location(s):

S14a: Street Address: 3400 INTERNATIONAL DRIVE, NW.			
S14b. City: WASHINGTON D.C.	S14c. County:	S14d. State/Country DC	S14e. Zip Code: 20008
S14f. Telephone Number: 202-944-7701		S14g. Call Sign of Control Station (if appropriate):	

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Characteristics and
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S15. SPACECRAFT PHYSICAL CHARACTERISTICS:

S16. SPACECRAFT ELECTRICAL CHARACTERISTICS:

S17. CERTIFICATIONS:

a. Are the power flux density limits of § 25.208 met?	<input type="checkbox"/>	YES	<input type="checkbox"/>	#	NO	<input type="checkbox"/>	#	N/A
b. Are the appropriate service area coverage requirements of § 25.143(b)(ii) and (iii), or § 25.145(c)(1) and (2) met?	<input type="checkbox"/>	YES	<input type="checkbox"/>	#	NO	<input type="checkbox"/>	#	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?	<input type="checkbox"/>	YES	<input type="checkbox"/>	#	NO	<input type="checkbox"/>	#	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.								