

**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: PAS 5		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: <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
12250	M	12750	M	T	Fixed Satellite Service

S3. ORBITAL INFORMATION FOR GEOSTATIONARY SATELLITES ONLY:

a. Nominal Orbital Longitude (Degrees E/W): 166 E		b. Alternate Orbital Longitude (Degrees E/W):		c. Reason for orbital location selection:			
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: 0.05 Degrees		g. Westernmost: 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		EAST ASIA AND AUSTRALIA
2	S		NEW ZEALAND

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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
SVDL	T	37	31					2			56						

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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
PHU	R	C	166		PHUL.gxt					
SVDL	T	C	166		SVDL.gxt	-148	-145.5	-143	-140.5	-138

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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)
KU1	36000	R	14036	H	C
KU2	36000	R	14076	H	C
KU3	36000	R	14116	H	C
KU4	36000	R	14156	H	C
KU5	36000	R	14196	H	C
KU6	36000	R	14236	H	C
KU7	36000	R	14276	H	C
KU8	36000	R	14316	H	C
KU9	36000	R	14356	H	C
KU10	36000	R	14396	H	C
KU11	36000	R	14436	H	C
KU12	36000	R	14476	H	C
KD1	36000	T	12286	V	C
KD2	36000	T	12326	V	C
KD3	36000	T	12366	V	C
KD4	36000	T	12406	V	C
KD5	36000	T	12446	V	C
KD6	36000	T	12486	V	C
KD7	36000	T	12526	V	C
KD8	36000	T	12566	V	C
KD9	36000	T	12606	V	C
KD10	36000	T	12646	V	C
KD11	36000	T	12686	V	C
KD12	36000	T	12726	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
1K	132.8	KU1	PHUL	KD1	SVDL
2K	132.8	KU2	PHUL	KD2	SVDL
3K	132.8	KU3	PHUL	KD3	SVDL
4K	132.8	KU4	PHUL	KD4	SVDL
5K	132.8	KU5	PHUL	KD5	SVDL
6K	132.8	KU6	PHUL	KD6	SVDL
7K	132.8	KU7	PHUL	KD7	SVDL
8K	132.8	KU8	PHUL	KD8	SVDL
9K	132.8	KU9	PHUL	KD9	SVDL
10K	132.8	KU10	PHUL	KD10	SVDL
11K	132.8	KU11	PHUL	KD11	SVDL
12K	132.8	KU12	PHUL	KD12	SVDL

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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	30M1G7W	36000	4	36863	0.75		6.1	15.2
D2	8M35G7W	9000	4	6000	0.5		4.1	15.5
D3	1M23G7W	1450	2	512	0.5		3.4	12.7
D4	307KG7W	400	2	128	0.5		3.4	15.5
D5	70K4G7W	100	4	64	0.5		5.3	16.3

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Page 8: Analog Modulation

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					PAL	15.6	2.1		10	19.3

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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/m2/Hz)	(o) Assoc. Stn Rec. G/T (dB/K)
(j) Min.	(k) Max.			(l) Min.	(m) Max.									
1K	12K		A1	1		PAS-8_SCHED	4000	58.1	17.8	23.8	48.2	54.2	-138	27.1
1K	12K	D1		1		PAS-8_SCHED		58.1	16.8	22.8	50	56	-144.8	19.2
1K	12K	D2		2	9000	PAS-8_SCHED		58.1	8.2	14.2	42	48	-147.3	22.7
1K	12K	D3		24	1450	PAS-8_SCHED		58.1	-2.9	3.1	31	37	-150	22.7
1K	12K	D4		90	400	PAS-8_SCHED		46.4	-1.5	4.5	20.7	26.7	-154.3	35
1K	12K	D5		270	100	PAS-8_SCHED		58.1	-11.7	-5.7	22.2	28.2	-146.4	22.7

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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

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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.								