

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

a. Space Station or Satellite Network Name: STAR ONE C3		e. Estimated Date of Placement into Service: 8/31/2012		i. Will the space station(s) operate on a Common Carrier Basis: N	
b. Construction Commencement Date: 1/26/2010		f. Estimated Lifetime of Satellite(s): 16 Years		j. Number of transponders offered on a common carrier basis: 0	
c. Construction Completion Date: 5/16/2012		g. Total Number of Transponders: 6		k. Total Common Carrier Transponder Bandwidth: 0 MHz	
d1. Est Launch Date Begin: 6/25/2012	d2. Est Launch Date End: 7/31/2012	h. Total Transponder Bandwidth (no. transponders x Bandwidth) 432 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	Nature of Service(s): List all that apply to this band	f.
Lower Frequency (.Hz)		Upper Frequency (.Hz)				
a. Numeric	b. Unit (K/M/G)	c. Numeric	d. Unit (K/M/G)			
13.75	G	14.0	G	R	Fixed Satellite Service	
10.95	G	11.2	G	T	Fixed Satellite Service	

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

a. Nominal Orbital Longitude (Degrees E/W): 75 W		b. Alternate Orbital Longitude (Degrees E/W):		c. Reason for orbital location selection:  The Brazilian telecommunications authority has authorized Star One to operate the STAR ONE C3 satellite at 75°W.L.	
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): <u>      </u> Degrees <u>      </u> E/W	
d. Toward West:	0.05 Degrees	e. Toward East:		g. Westernmost:	h. Easternmost:
	0.05 Degrees			0.1 Degrees	
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 intital 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.
SA1	S		-10 dB contour of beams ANDUH and ANDUV
SA2	S		-10 dB contour of beams BRAUH and BRAUV
SA3	S		-10 dB contour of beams ANDDH and ANDDV
SA4	S		-10 dB contour of beams BRADH and BRADV

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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				
										(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)	Input Attenuator (dB)	
		(q) Max. Value	(r) Step Size														
AND	R	34.43	24.43	0.12		30	N	0	SA1				572	6.9	-110	40	1
AND	R	34.43	24.43	0.12		30	N	90	SA1				572	6.9	-110	40	1
BRA	R	34.75	24.75	0.12		30	N	0	SA2				508	7.7	-110	40	1
BRA	R	34.75	24.75	0.12		30	N	90	SA2				508	7.7	-110	40	1
AND	T	32.41	22.41	0.12		30	N	0	SA3	1.4	95.3	52.2					
AND	T	32.41	22.41	0.12		30	N	90	SA3	1.4	95.3	52.2					
BRA	T	34.82	24.82	0.12		30	N	0	SA4	1.4	99.5	54.8					
BRA	T	34.82	24.82	0.12		30	N	90	SA4	1.4	99.5	54.8					

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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
AND	R	C	-75		ANDUH.gxt					
AND	R	C	-75		ANDUV.gxt					
BRA	R	C	-75		BRAUH.gxt					
BRA	R	C	-75		BRAUV.gxt					
AND	T	C	-75		ANDDH.gxt	-169.3	-169.1	-168	-166.9	-165.8
AND	T	C	-75		ANDDV.gxt	-169.3	-168.6	-168	-166.9	-163.8
BRA	T	C	-75		BRADH.gxt	-168.3	-167.1	-166	-164.9	-158.7
BRA	T	C	-75		BRADV.gxt	-168.3	-167.1	-166	-163.7	-157.8

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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)
U0001	72000	R	13795	H	C
U0002	72000	R	13875	H	C
U0003	72000	R	13955	H	C
U0004	72000	R	13799	V	C
U0005	72000	R	13879	V	C
U0006	72000	R	13959	V	C
D0001	72000	T	10990	V	C
D0002	72000	T	11070	V	C
D0003	72000	T	11150	V	C
D0004	72000	T	10994	H	C
D0005	72000	T	11074	H	C
D0006	72000	T	11154	H	C

(a) Transponder ID	(b) Transponder Gain (dB)	Receive Band		Transmit Band	
		(c) Channel No.	(d) Beam ID	(e) Channel No.	(f) Beam ID
AA001	139.7	U0001	ANDUH	D0001	ANDDV
AA002	139.7	U0002	ANDUH	D0002	ANDDV
AA003	139.7	U0003	ANDUH	D0003	ANDDV
AA004	139.7	U0004	ANDUV	D0004	ANDDH
AA005	139.7	U0005	ANDUV	D0005	ANDDH
AA006	139.7	U0006	ANDUV	D0006	ANDDH
AB001	139.9	U0001	ANDUH	D0001	BRADV
AB002	139.9	U0002	ANDUH	D0002	BRADV
AB003	139.9	U0003	ANDUH	D0003	BRADV
AB004	139.9	U0004	ANDUV	D0004	BRADH
AB005	139.9	U0005	ANDUV	D0005	BRADH
AB006	139.9	U0006	ANDUV	D0006	BRADH
BA001	139.4	U0001	BRAUH	D0001	ANDDV
BA002	139.4	U0002	BRAUH	D0002	ANDDV
BA003	139.4	U0003	BRAUH	D0003	ANDDV
BA004	139.4	U0004	BRAUV	D0004	ANDDH
BA005	139.4	U0005	BRAUV	D0005	ANDDH
BA006	139.4	U0006	BRAUV	D0006	ANDDH

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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	445KG7W	445	4	512	0.691		5.7	17.9
D2	1M78G7W	1778	4	2048	0.691		5.7	17.9
D3	6M33G7W	6330	4	8448	0.801		5.8	18
D4	17M9G7W	17900	4	19112	0.641		3.9	16.1
D5	36M0G7W	36000	4	50492	0.841		6.5	18.7
D6	72M0G7W	72000	4	100983	0.841		6.5	18.7





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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) (j) Min. (k) Max.		EIRP (dBW) (l) Min. (m) Max.		(n) Max. Power Flux Density (dBW/m <sup>2</sup> /Hz)	(o) Assoc. Stn Rec. G/T (dB/K)
AA001	AA006	D1		161	445	LB1.doc		54.5	-5.9	4.1	24.5	34.5	-148.1	20.8
AA001	AA006	D2		40	1800	LB2.doc		54.5	-1.7	8.3	23.7	33.7	-154.9	24.3
AA001	AA006	D3		11	6500	LB3.doc		54.5	3.9	13.9	29.3	39.3	-154.8	26.6
AA001	AA006	D4		4	18000	LB4.doc		54.5	8.3	18.3	33.7	43.7	-154.9	22.8
AA001	AA006	D5		2	36000	LB5.doc		54.5	11.3	21.3	36.7	46.7	-154.9	26.6
AA001	AA006	D6		1		LB6.doc		54.5	24.4	30	42.2	52.2	-152.4	22.8
AB001	AB006	D1		161	445	LB7.doc		54.5	-7.5	2.5	24.5	34.5	-148.4	20.8
AB001	AB006	D2		40	1800	LB8.doc		54.5	-1.7	8.3	26.3	36.3	-152.6	24.3
AB001	AB006	D3		11	6500	LB9.doc		54.5	3.9	13.9	31.9	41.9	-152.5	26.6
AB001	AB006	D4		4	18000	LB10.doc		54.5	8.3	18.3	36.3	46.3	-152.6	20.8
AB001	AB006	D5		2	36000	LB11.doc		54.5	11.3	21.3	39.3	49.3	-152.7	26.6
AB001	AB006	D6		1		LB12.doc		54.5	22	30	44.8	54.8	-150.2	22.8
BA001	BA006	D1		161	445	LB13.doc		54.5	-7.8	2.2	17.6	27.6	-154.9	24.3
BA001	BA006	D2		40	1800	LB14.doc		54.5	-1.7	8.3	23.7	33.7	-154.9	24.3
BA001	BA006	D3		11	6500	LB15.doc		54.5	3.9	13.9	29.3	39.3	-154.8	26.6
BA001	BA006	D4		4	18000	LB16.doc		54.5	8.3	18.3	33.7	43.7	-154.9	20.8
BA001	BA006	D5		2	36000	LB17.doc		54.5	11.3	21.3	36.7	46.7	-154.9	26.6
BA001	BA006	D6		1		LB18.doc		54.5	24.4	30	42.2	52.2	-152.4	22.8

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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): No

**Remote Control (TT C) Location(s):**

S14a: Street Address: Estação Terrena de Guaratiba (Primary Control Station)			
S14b. City: Rio de Janeiro	S14c. County: RJ	S14d. State/Country	S14e. Zip Code: 23020-715
S14f. Telephone Number: 5521 2121 4440		S14g. Call Sign of Control Station (if appropriate):	

**Remote Control (TT C) Location(s):**

S14a: Street Address: Estação Terrena de Tanguá (Backup Control Station)			
S14b. City: Tangua	S14c. County: RJ	S14d. State/Country	S14e. Zip Code: 24800-000
S14f. Telephone Number: 5521 2121 4023		S14g. Call Sign of Control Station (if appropriate):	

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**S15. SPACECRAFT PHYSICAL CHARACTERISTICS:**

S15a. Mass of spacecraft without fuel (kg): 1402	Spacecraft Dimensions (meters)	Probability of Survival to End of Life (0.0 - 1.0)
S15b. Mass of fuel and disposables at launch (kg): 1748		
S15c. Mass of spacecraft and fuel at launch (kg): 3150	S15f. Length (m): 3.38	S15i. Payload: 0.87
S15d. Mass of fuel, in orbit, at beginning of life (kg): 525	S15g. Width (m): 2.35	S15j. Bus: 0.87
S15e. Deployed Area of Solar Array (square meters): 17.62	S15h. Height (m): 5.43	S15k. Total: 0.76

**S16. SPACECRAFT ELECTRICAL CHARACTERISTICS:**

Spacecraft Subsystem	Electrical Power (Watts) At Beginning of Life		Electrical Power (Watts) At End of Life	
	At Equinox	At Solstice	At Equinox	At Solstice
Payload (Watts):	(a): 5452.5	(f): 5149.5	(k): 5452.5	(p): 5149.5
Bus (Watts):	(b): 417.6	(g): 369.5	(l): 430.4	(q): 330.6
Total (Watts):	(c): 5870.1	(h): 5519	(m): 5882.9	(r): 5480.1
Solar Array (Watts):	(d): 7409	(i): 6569.8	(n): 6874.8	(s): 6296.5
Depth of Battery Discharge (%):	(e) 75 %	(j) %	(o) 75 %	(t) %

**S17. CERTIFICATIONS:**

a. Are the power flux density limits of § 25.208 met?	<input checked="" 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 checked="" 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 checked="" 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.**