Approved by OMD Control Number 3060-0678
Estimated Burden Hours: 80

FCC 312 Schedule S	FEDERAL COMMUNICATIONS COMMISSION SATELLITE SPACE STATION AUTHORIZATIONS (Technical and Operational Description)	Page 1: General, Frequency Bands, and GSO Orbit

S1. GENERAL INFORMATION Complete for all satellite applications.

a. Space Station or Satellite Network Name:		e. Estimated Date of Placement into Service:	i Will the space station(s) operate on a Common Carrier Basis:
INTELSAT 805			N
b. Construction Commencement Date:		f. Estimated Lifetime of Satellite(s):	j. Number of transponders offered on a common carrier basis:
		4 Years	0
c. Construction Completion Date:		g. Total Number of Transponders:	k. Total Common Carrier Transponder Bandwidth:
		31	0 MHz
d1. Est Launch Date Begin:	d2. Est Launch Date End:	h. Total Transponder Bandwidth (no. transponders x Bandwidth)	l. Orbit Type: Mark all boxes that apply:
		1523 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				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)		
3400	M	4200	M	T	Fixed Satellite Service
5850	M	6425	M	R	Fixed Satellite Service
6425	M	6650	M	R	Fixed Satellite Service
12.5	G	12.75	G	T	Fixed Satellite Service
14.0	G	14.25	G	R	Fixed Satellite Service
12.5	G	12.75	G	T	Fixed Satellite Service

S3. ORBITAL INFORMATION FOR GEOSTATIONARY SATELLITES ONLY:

a. Nominal Orbital Longitude (Degrees E/W):	b. Alternate Orbital Longitude (Degrees E/W):		c. Reason for orbital location selection:
169 E			
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: 0.5 Degrees	Range of orbital are in which adequate service can be provided (Optional): Degrees E/W g. Westernmost: h. Easternmost:	
i. Reason for service are selection (Optional):			

FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)

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:

(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

FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)

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.
CA	S		Western North America, Eastern Asia, Australia
KuA	S		Japan
GLB	S		Global

FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)

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 Isolation (dB)	(h) Polarization Switchable? (Y/N)	(i) Polarization Alignment Rel. Equatorial Plane (Degrees)	(j) Service Area ID	Transmit			Receive				
		(c) Peak (dBi)	(d) Edge (dBi)							(k) Input Losses (dB)	(l) Effective Output Power (W)	(m) Max. EIRP (dBW)	(n) System Noice 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
HAU	R	24.4	18.4	0.19	0.34		N	0	CA					-4.1	-96.1	1	1
HAD	T	24.9	18.9	0.19	0.34		N	90	CA			42.8					
HBU	R	24.4	18.4	0.19	0.34		N	90	CA					-4.1	-96	1	1
HBD	T	24.9	18.9	0.19	0.34		N	0	CA			42.8					
S1U	R	33.9	25.6	0.19	0.34		N	0	KuA					6.1	-101.6	1	1
S1D	T	31.8	24.6	0.19	0.34		N	90	KuA			53.6					
CMD	R	10.3	9.3	0.19	0.34		N		GLB					-17.1	-90	1	1
TLM	T	11.3	10.3	0.19	0.34		N		GLB			6.9					
BNC	T	13	10.3	0.19	0.34		N	45	GLB			9.6					
TBR	T	12.5	11	0.19	0.34		N		GLB			7					
CBLU	R	13	12	0.19	0.34		N		GLB					-8.1	-90		
CBR	R	12	11	0.19	0.34		N		GLB					-14	-90	1	1

FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)

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
S1U	R	C	169		S1U.gxt					
S1D	T	C	169		S1D.gxt	-148	-147.8	-147.7	-147.6	-147.5
HAU	R	C	169		HAU.gxt					
HAD	T	C	169		HAD.gxt	-159.3	-159.1	-159	-158.9	-158.8
TLM	T	C	169			-175.1	-175	-174.9	-174.8	-174.7
BNC	T	C	169			-161.6	-161.5	-172.2	-172.1	-172
HBU	R	C	169		HBU.gxt					
HBD	T	C	169		HBD.gxt	-159.3	-159.1	-159	-158.9	-158.8
TBR	T	C	169			-175	-174.9	-174.8	-174.7	-174.6
CMD	R	C	169							
CBLU	R	C	169							
CBR	R	C	169							

FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)

S9. SPACE STATION CHANNELS For each frequency channel 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)
HAU01	36000	R	5908	H	C
HAU02	72000	R	5970	H	C
HAU03	72000	R	6050	H	C
HAU04	72000	R	6130	H	C
HAU05	72000	R	6220	H	C
HAU06	36000	R	6280	H	C
HAU07	36000	R	6320	H	C
HAU08	36000	R	6360	H	C
HAU09	41000	R	6402.5	H	C
HAU10	36000	R	6467	H	C
HAU11	36000	R	6507	H	C
HAU12	36000	R	6547	H	C
HAU13	36000	R	6587	H	C
HAU14	36000	R	6627	H	C
HBU01	36000	R	5908	V	C
HBU02	72000	R	5970	V	C
HBU03	72000	R	6050	V	C
HBU04	72000	R	6130	V	C
HBU05	72000	R	6220	V	C
HBU06	36000	R	6280	V	C
HBU07	36000	R	6320	V	C
HBU08	36000	R	6360	V	C
HBU09	41000	R	6402.5	V	C
HBU10	36000	R	6467	V	C
HBU11	36000	R	6507	V	C
HBU12	36000	R	6547	V	C
HBU13	36000	R	6587	V	C
HBU14	36000	R	6627	V	C
HAD01	36000	T	3683	V	C
HAD02	72000	T	3745	V	C

S10. SPACE STATION TRANSPONDERS For each transponder provide:

(a) Transponder ID	(b) Transponder Gain (dB)	Receive Band		Transmit Band	
		(c) Channel No.	(d) Beam ID	(e) Channel No.	(f) Beam ID
TC001		HAU01	HAU	HAD01	HAD
TC002		HAU02	HAU	HAD02	HAD
TC003		HAU03	HAU	HAD03	HAD
TC004		HAU04	HAU	HAD04	HAD
TC005		HAU05	HAU	HAD05	HAD
TC006		HAU06	HAU	HAD06	HAD
TC007		HAU07	HAU	HAD07	HAD
TC008		HAU08	HAU	HAD08	HAD
TC009		HAU09	HAU	HAD09	HAD
TC010		HAU10	HAU	HAD10	HAD
TC011		HAU11	HAU	HAD11	HAD
TC012		HAU12	HAU	HAD12	HAD
TC013		HAU13	HAU	HAD13	HAD
TC014		HAU14	HAU	HAD14	HAD
TC015		HBU01	HBU	HBD01	HBD
TC016		HBU02	HBU	HBD02	HBD
TC017		HBU03	HBU	HBD03	HBD
TC018		HBU04	HBU	HBD04	HBD
TC019		HBU05	HBU	HBD05	HBD
TC020		HBU06	HBU	HBD06	HBD
TC021		HBU07	HBU	HBD07	HBD
TC022		HBU08	HBU	HBD08	HBD
TC023		HBU09	HBU	HBD09	HBD
TC024		HBU10	HBU	HBD10	HBD
TC025		HBU11	HBU	HBD11	HBD
TC026		HBU12	HBU	HBD12	HBD
TC027		HBU13	HBU	HBD13	HBD
TC028		HBU14	HBU	HBD14	HBD
TK029		KUU01	S1U	KUD01	S1D
TK030		KUU02	S1U	KUD02	S1D

HAD03	72000	T	3825	V	C
HAD04	72000	T	3905	V	C
HAD05	72000	T	3995	V	C
HAD06	36000	T	4055	V	C
HAD07	36000	T	4095	V	C
HAD08	36000	T	4135	V	C
HAD09	41000	T	4177.5	V	C
HAD10	36000	T	3442	V	C
HAD11	36000	T	3482	V	C
HAD12	36000	T	3522	V	C
HAD13	36000	T	3562	V	C
HAD14	36000	T	3602	V	C
HBD01	36000	T	3683	H	C
HBD02	72000	T	3745	H	C
HBD03	72000	T	3825	H	C
HBD04	72000	T	3905	H	C
HBD05	72000	T	3995	H	C
HBD06	36000	T	4055	H	C
HBD07	36000	T	4095	H	C
HBD08	36000	T	4135	H	C
HBD09	41000	T	4177.5	H	C
HBD10	36000	T	3442	H	C
HBD11	36000	T	3482	H	C
HBD12	36000	T	3522	H	C
HBD13	36000	T	3562	H	C
HBD14	36000	T	3602	H	C
BNC1	25	T	3950	V	C
BNK1	25	T	12501	V	C
TLM1A	300	T	3947.5	R	T
TLM1B	300	T	3948	R	T
TLM2A	300	T	3952.5	R	T
TLM2B	300	T	3952	R	T
KUU01	77000	R	14042.5	H	C
KUU02	72000	R	14125	H	C
KUU03	72000	R	14205	H	C
KUD01	77000	T	12547.5	V	C
KUD02	72000	T	12630	V	C
KUD03	72000	T	12710	V	C
CMD01	1000	R	6173.7	L	T

TK031		KUU03	S1U	KUD03	S1D

CMD02	1000	R	6173.7	L	T
CMD03	1000	R	6176.3	R	T

FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)

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	36M0G7W	36000						
D2	8M25G7W	8250.5						
D3	1M43G7W	1434						
D4	861KG7W	861						

FEDERAL COMMUNICATIONS COMMISSION **Page 8: Analog Modulation**

SATELLITE SPACE STATION AUTHORIZATIONS

FCC Form 312 - Schedule S: (Technical and Operational Description)

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						

FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)

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

Associated Transponder ID Range		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)			
								(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)
(a) Start	(b) End	(c) Digital (Table S11)	(d) Analog (Table S12)						(j) Min.	(k) Max.	(l) Min.	(m) Max.		
TC001	TC028	D1										37		
TC001	TC028	D2										33.4		
TC001	TC028	D3										21		
TC001	TC028	D4										17		
TK029	TK031	D1										47.6		
TK029	TK031	D2										40		
TK029	TK031	D3										32		
TK029	TK031	D4										28		

FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)

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: 7900 Tysons One Place			
S14b. City: McLean	S14c. County: Fairfax	S14d. State/Country VA	S14e. Zip Code: 22102
S14f. Telephone Number: 703-559-7701	S14g. Call Sign of Control Station (if appropriate):		

S15. SPACECRAFT PHYSICAL CHARACTERISTICS:

S16. SPACECRAFT ELECTRICAL CHARACTERISTICS:

S17. CERTIFICATIONS:

a. Are the power flux density limits of § 25.208 met?:	[X] **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) met?	[ ] **YES**	[ ] **NO**	[X] **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?	[X] **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.

FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT

The public reporting estimate for this collection of information includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the required data, and completing and reviewing the collection of information. If you have any comments on this burden estimate, or how we can improve the collection and reduce the burden it causes you, please write to the Federal Communications Commission, AMD-PERM, Paperwork Reduction Project (3060-0678), Washington, DC 20554. We will also accept your comments regarding the Paperwork Reduction Act aspects of this collection via the Internet if you send them to PERM@fcc.gov. PLEASE DO NOT SEND COMPLETED FORMS TO THIS ADDRESS.

Remember - You are not required to respond to a collection of information sponsored by the Federal government, and the government may not conduct or sponsor this collection, unless it displays a currently valid OMB control number or if we fail to provide you with this notice. This collection has been assigned an OMB control number of 3060-0678.

THE FOREGOING NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104-13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.