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FILED ELECTRONICALLY

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: Notice of Oral *Ex Parte* Presentations – Comprehensive Review of Licensing and Operating Rules for Satellite Services, IB Docket No. 12-267

Dear Ms. Dortch:

Representatives of SES met to discuss the above-referenced rulemaking proceeding regarding reform of the Commission's Part 25 rules on December 10, 2015 with Johanna Thomas, Legal Advisor to Commissioner Rosenworcel. The SES representatives present at the meeting were: Kimberly Baum, Vice President, Spectrum Management & Development Americas, and Karis Hastings, counsel for SES. Ms. Baum and Ms. Hastings also had telephone conversations regarding this proceeding on December 10 with Jose Albuquerque, Chief of the Satellite Division, and with Jennifer Gilsenan, Assistant Bureau Chief in the International Bureau.

The discussions focused on ensuring that pending coordination, new satellites would be guaranteed the ability to operate at reasonable, competitively-viable default power levels without the need to gain the consent of incumbent neighboring satellite networks. SES used the attached talking points as a framework for the discussions.

In response to a question from Ms. Thomas, SES also addressed the possibility of requiring an operator seeking to use a new orbital location to comply with the terms of a coordination agreement previously reached between a prior occupant of that location and a neighboring incumbent satellite operator. SES expressed a number of concerns about such an approach. SES emphasized that it would be unfair to force a new entrant to conform its operations to a coordination agreement reached without the new entrant's participation and possibly tailored to address very different operational characteristics. SES also pointed out the possible problems in identifying or verifying a prior coordination agreement: for example, in cases where the same operator or affiliated entities had once operated in neighboring slots, there may be no written coordination agreements at all, and certainly any agreement that did exist would not be the product of arm's length negotiations. SES reiterated that every new entrant must retain the guaranteed ability to operate at the default two-degree spacing power levels, notwithstanding any previous coordination agreement involving the orbital location.

Please contact the undersigned if you have any questions.

Respectfully submitted,

/s/ Karis A. Hastings

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Attachment

cc: Johanna Thomas
Jose Albuquerque
Jennifer Gilsenan

The Commission's Successful Two-Degree Spacing Framework Must Be Retained to Ensure Continued Opportunities for New Satellites to Serve the United States

- Two-degree spacing has done exactly what it was intended to do: meet U.S. customers' demand for satellite services and ensure that "both existing operators and new entrants [can] satisfy growing user requirements with a minimum of administrative costs and delay." (*Two Degree Spacing Order,* 48 FR 40233 at ¶ 1)
    - The attached charts set forth the results of this policy:
        - robust use of the orbital arc by dozens of spacecraft
        - almost all operations at or above the power levels in the FNPRM
    - Preserving the guarantee that new satellites can operate at reasonable levels pending coordination is critical to prevent a freeze or even reversal of the competitive benefits two-degree spacing has produced
        - The ability to deploy state-of-the-art spacecraft not just at new slots, but as replacements in existing slots, could be undermined by a change
- The record clearly supports retaining the two-degree spacing framework
    - Every party but Intelsat that has commented on the matter supports keeping two-degree spacing (SES, DIRECTV, EchoStar/Hughes, ViaSat, and Iridium)
    - Intelsat's position that two-degree spacing should be eliminated in favor of relying on ITU coordination priority is blatantly self-serving and would benefit Intelsat at the expense of other operators and of competition
    - The Intelsat claim that two-degree spacing disadvantages U.S. licensees is baseless since the Commission applies the two-degree framework to foreign licensees seeking to serve the U.S. as well as to U.S. licensees
- The suggestion that an incumbent with especially sensitive links should be granted special protection from entry by a two-degree compliant neighbor must be rejected as it would undermine the core purpose of two-degree spacing
    - The record shows that satellite operators including Intelsat have been able to deploy and maintain mobility services and other small-antenna offerings under the existing two-degree spacing framework
        - For example, Gogo's aeronautical service uses satellites operated by Intelsat, SES, Eutelsat Americas and others, including co-frequency, co-coverage satellites at two-degree spacing

- Changing Commission policy to allow special protection would create the risk of abuse by incumbents seeking to block adjacent entry
    - How would the Commission confirm an incumbent's claim that it is entitled to extra protection? How would disputes be resolved?

- SES supports a minor adjustment to the two-degree spacing framework to allow an incumbent who has coordinated power levels above the two-degree baseline to maintain those levels notwithstanding the arrival of a new two-degree neighbor

- While maintaining the basic framework, the Commission should also increase the power levels to be more consistent with typical current spacecraft characteristics, setting the levels at:
    - 3 dBW/4 kHz for digital carriers in the conventional and extended C-bands and
    - 13 dBW/4 kHz for digital carriers in the conventional and extended Ku-bands
    - If the Commission does not revise the levels as above, it should at least bridge the gap between existing satellites and new entrants by allowing a new satellite to operate at levels halfway between the two-degree levels and the adjacent incumbent satellite's operating levels

ATTACHMENT

Table 1. EIRP levels of C-band Spacecraft Operating from 67˚ to 139˚ W.L.

Satellite	Operator	Orbital location (E.L.)	C-band Peak EIRP (dBW)	C-band Transponder (MHz)	C EIRP density (dBW/Hz)	C EIRP density (dBW/ 4kHz)	Source
AMC 8	SES	-139	42.6	36	-32.17	3.8	CONUS beam, SES website
AMC 8	SES	-139	45.3	36	-29.47	6.5	Alaska beam, SES internal data
AMC 7	SES	-135	43.13	36	-31.64	4.4	CONUS beam, FCC application
AMC 7	SES	-135	45.47	36	-29.30	6.7	Alaska beam, FCC application
AMC 10	SES	-135	42.5	36	-32.27	3.7	FCC application
G-15	Intelsat	-133	44.2	36	-30.57	5.4	FCC application
AMC 11	SES	-131	42.5	36	-32.27	3.7	FCC application
G-12	Intelsat	-129	44.2	36	-30.57	5.4	FCC application
AMC 1	SES	-129	41.3	36	-33.47	2.5	FCC application; C band not used except for TT&C
G-13	Intelsat	-127	45.1	36	-29.67	6.3	FCC application
G-14	Intelsat	-125	44.2	36	-30.57	5.4	FCC application
G-18	Intelsat	-123	46.5	36	-28.27	7.7	FCC application
G-23	Intelsat	-121	43.0	36	-31.77	4.2	Intelsat website
Anik F3	Telesat	-118.7	43.2	36	-31.57	4.4	FCC application
EA 115W A	Eutelsat Americas	-114.9	41.9	36	-32.87	3.1	FCC application
EA 113W A	Eutelsat Americas	-113	45.5	36	-29.27	6.7	FCC application
Anik F2	Telesat	-111.1	41.9	36	-32.87	3.1	FCC application
Anik F1R	Telesat	-107.3	43.0	36	-31.77	4.2	FCC application
AMC 18	SES	-105	41.5	36	-33.27	2.7	FCC application
SES-3	SES	-103	42.1	36	-32.67	3.3	FCC application
SES-1	SES	-101	41.7	36	-33.07	2.9	FCC application
G-16	Intelsat	-99	43.7	36	-31.07	4.9	FCC application
G-19	Intelsat	-97	42.2	36	-32.57	3.4	FCC application
G-3C	Intelsat	-95	42	36	-32.77	3.2	FCC application
G-25	Intelsat	-93	39	36	-35.77	0.2	Intelsat website
G-17	Intelsat	-91	43.3	36	-31.47	4.5	FCC application
G-28	Intelsat	-89	42.7	36	-32.07	3.9	Intelsat website
SES-2	SES	-87	43.85	36	-30.92	5.1	FCC application
AMC 9	SES	-83	41.4	36	-33.37	2.6	FCC application
AMC 2	SES	-81	42.1	36	-32.67	3.3	FCC application
AMC 6	SES	-72	41.9	36	-32.87	3.1	FCC application
AMC 3	SES	-67	42.02	36	-32.75	3.3	FCC application
AMC 4	SES	-67	41.72	36	-33.05	3.0	FCC application

Table 2. EIRP levels of Ku-band Spacecraft Operating from 67° to 139° W.L.[1]

Satellite	Operator	Orbital location (E.L.)	Ku-band Peak EIRP (dBW)	Ku-band Transponder (MHz)	Ku EIRP density (dBW/Hz)	Ku EIRP density (dBW/ 4kHz)	Source
AMC 1	SES	-129	50.4	36	-24.37	11.65	FCC application
Horizons 1	Intelsat	-127	51.8	36	-22.97	13.05	FCC application
AMC 21	SES	-125	51.4	36	-23.37	12.65	FCC application; 50 state beam
AMC-21	SES	-125	53.7	36	-21.07	14.95	FCC application; Caribbean/East Coast beam
G-18	Intelsat	-123	53.6	36	-21.17	14.85	FCC application
Echo 9	EchoStar	-121	52.54	26	-20.82	15.20	FCC application
Anik F3	Telesat	-118.7	54	27	-19.52	16.50	FCC application
EA 115W A	Eutelsat Americas	-114.9	52.4	36	-22.37	13.65	FCC application
EA 113W A	Eutelsat Americas	-113	52.6	36	-22.17	13.85	FCC application
Anik F2	Telesat	-111.1	51.9	27	-21.62	14.40	FCC application
Anik F1R	Telesat	-107.3	52.5	27	-21.02	15.00	FCC application
AMC 15	SES	-105	54	36	-20.77	15.25	FCC application; linear pol antenna
AMC 15	SES	-105	56.7	36	-18.07	17.95	FCC application; circular pol antenna
SES-3	SES	-103	53.3	36	-21.47	14.55	FCC application
SES-1	SES	-101	53.6	36	-21.17	14.85	FCC application
G-16	Intelsat	-99	51.9	36	-22.87	13.15	FCC application
G-19	Intelsat	-97	49.5	27	-24.02	12.00	FCC application
G-3C	Intelsat	-95	50.8	27	-22.72	13.30	FCC application
G-25	Intelsat	-93	51	27	-22.52	13.50	Intelsat website
G-17	Intelsat	-91	51.3	36	-23.47	12.55	FCC application
G-28	Intelsat	-89	51.1	36	-23.67	12.35	Intelsat website
SES-2	SES	-87	52.62	36	-22.15	13.87	FCC application
AMC 16	SES	-85	53	36	-21.77	14.25	FCC application; linear pol antenna
AMC 16	SES	-85	56.3	36	-18.47	17.55	FCC application; circular pol antenna
AMC 9	SES	-83	53.3	36	-21.47	14.55	FCC application
AMC 2	SES	-81	49.7	36	-25.07	10.95	FCC application
AMC 6	SES	-72	52.9	36	-21.87	14.15	FCC application
AMC 3	SES	-67	50.58	36	-24.19	11.83	FCC application
AMC 4	SES	-67	52.47	36	-22.30	13.72	FCC application

[1] Twenty-four out of the twenty-eight Galaxy-19, -3C and -25 transponders have 27 MHz transponders. Therefore, the present analysis uses the 27 MHz transponders, which represent the majority of the capacity. In addition, the present analysis does not include AMC-5, which was deorbited in May 2014.