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Federal Communications Commission
Office of Secretary
Int'l Bureau

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BY HAND DELIVERY

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

Re: ***Ex Parte Presentation***
Report No. SPB-196; SAT-PDR-20020425-00071

Dear Ms. Dortch:

On July 22, 2004, Romulo Pontual, Jim Butterworth, David Pattillo, Susan Eid, and undersigned counsel on behalf of The DIRECTV Group, Inc. ("DIRECTV"), met with Tom Tycz, Selina Khan, Chip Fleming, Rockie Patterson, JoAnn Lucanik, Marilyn Simon, and John Martin (by phone) of the International Bureau to discuss the enclosed materials (which were distributed at the meeting).

In this presentation, DIRECTV responded to a June 15, 2004 ex parte filing in which SES AMERICOM, Inc. ("SES") discussed Direct Broadcast Satellite ("DBS")/ Direct to Home ("DTH") satellite operations in the European market. Clearly, SES's presentation was designed to leave the impression that satellites serving Europe provide DBS/DTH services on the same frequencies to the same geographic area from satellites spaced from 2.3 degrees to 4.3 degrees apart. However, a closer reading of the SES filing reveals that frequencies used for DBS/DTH service to small dishes on one satellite are used for low power business services (such as cable backhaul and single channel per carrier transmissions) to much larger dishes on the others. Such an analysis is not informative on any issue in these proceedings.

As discussed in DIRECTV's presentation, coordinating services with such dissimilar characteristics is hardly impressive. In fact, coordination of FSS satellites with orbital spacing of only 2.0 degrees is the norm for operators serving the U.S. market. From DIRECTV's review of publicly available information on the operations of the satellites discussed in SES's filing, it appears that ***there is no actual DTH/DBS sharing***

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of the type that would be relevant to the issues in these proceedings – *i.e.*, sharing by two operators using the same frequencies to provide the same high-power DTH/DBS service to consumers with small receive dishes in the same geographic area.¹ DIRECTV also pointed out that, even if such sharing were accomplished over Europe, the differences in the operational characteristics and environmental factors facing satellites in Europe and the U.S. would render such an instance of little value in this proceeding.

DIRECTV urged the Commission not to be misled by SES's presentation. It contains no evidence that the short-spacing of high-power DBS/DTH services that it proposes for the United States has been successfully employed in Europe. DIRECTV also discussed the impact that SES's proposed operations would have on U.S. consumers, who would need larger receive antennas in order to maintain their quality of service in the presence of the interference SES proposes to introduce. The expense, inconvenience, and disruption that would accompany any effort to replace existing DIRECTV dishes with larger receive antennas would be a direct cost imposed upon American consumers by SES.

DIRECTV also pointed out that, because EchoStar has already secured all of the DBS capacity that SES seeks to gain at its short-spaced orbital location, its proposal would not even have the benefit of creating capacity for use by a new entrant into the U.S. market. Moreover, because EchoStar would control both its own DBS frequencies at 110° W.L and the same frequencies on the SES satellite at 105.5° W.L., it would be able to "coordinate" with itself – much as SES does in Europe with the Astra 1G and Astra 3A satellites discussed in its presentation – which may explain why EchoStar has been essentially acquiescent in SES's proposal since it struck its deal with SES.

Sincerely yours,



William M. Wiltshire

Enclosure

¹ In fact, one of the satellites cited in SES's presentation (Eutelsat II F3) operates in a 3.9 degree inclined orbit, and thus its signals can only be received by much larger dishes with tracking actuators – not the small, fixed consumer dishes currently in use for DBS/DTH in Europe. Thus, this satellite clearly is not providing DBS/DTH service of any kind on any frequency.

HARRIS, WILTSHIRE & GRANNIS LLP

Marlene H. Dortch

July 23, 2004

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cc: Tom Tycz
Selina Khan
Chip Fleming
Rockie Patterson
JoAnn Lucanik
Marilyn Simon
John Martin

**DIRECTV's Comments on SES's
Ex Parte Filing of June 15, 2004**

July 22, 2004

SES's Claims of Successful Operation of Reduced-Spaced DTH Satellites in Europe are Specious and Misleading



- Investigation of SES's claims yields little, if any, actual sharing
- SES's apparent parsing of the 2 GHz of BSS/FSS spectrum with Eutelsat in Region 1 cannot serve as a model for the 500 MHz of BSS in Region 2
- SES's coordination of FSS satellites as close as 2.3 degrees for SCPC and cable backhaul is inapposite. Such services in Region 2 are routinely coordinated to 2 degrees
- The "other satellites" SES uses in its analysis are Eutelsat's W2 (16E) and II-F3 (21.5E) satellites. Both these satellites have little DTH in the 12.5-12.75 GHz band. ***Additionally, Eutelsat II F3 is inclined 3.9 deg., and is not suitable for DTH/DBS service***
- The only satellite with "similar characteristics" in SES's analysis is its own Astra 3A at 23.5E. This hardly represents a competitive sharing scenario since SES has full control of both satellites and can adjust parameters at any time to optimize service

SES's Analysis and Examples are Not Relevant to DBS in the US



- Many differences between Region 1 FSS and Region 2 BSS, the most notable being the larger receive antennas for Region 1 FSS (60-90 cm) and less rain in Europe than in US
- Region 1 FSS and BSS bands have power limits, Region 2 BSS does not. ***Spot beams do not fit this power-limited reduced-spacing model***
- Acceptable C/I levels are not the same for Region 1 FSS and Region 2 BSS due to many factors. Two key factors allow for the use of lower C/Is in R1 FSS than for comparable availability in R2 BSS:
 - Europe has significantly less rain than the US (see chart p.11)
 - Region 1 uses linear polarization, which provides better x-pol isolation during rain than circular polarization
- US BSS spot beams require higher C/Is because they must also contend with adjacent beam interference

DTH/DBS Service Europe vs. US



Parameter	Europe	US
Spectrum	2.05 GHz of BSS/FSS	500 MHz of BSS
Receive antenna size	60-90 cm	45 cm
PFD limits	BSS and FSS pfd limits	None
Polarization	Linear	Circular
Rain attenuation	Less	More
Receive antenna squint	None	~0.3 deg.
Pointing	Easier	Harder + triple-sat
X-pol isolation	Higher during rain	Lower during rain

Astra 1G "Sharing"



- SES claims that its Astra 1G satellite co-exists with other DTH/DBS satellites less than 4.3 degrees away
- In fact, the satellites SES uses in its analysis have little DTH programming at all, and are mostly used as backhaul channels (see charts 7-9)
- Backhaul channels are typically low power and received by large antennas (e.g., 4.6m for the BBC feeds)
- Astra 3A appears to have no DTH at all on channels 13, 14, 15, 20, 22, and 23 in the 12.5-12.75 GHz band. According to LyngSat, these channels are used exclusively for "feeds" (backhaul)

Astra 1G "Sharing", cont'd



- Similarly, Eutelsat II F3 has only two DTH channels in the entire 12.5-12.75 GHz band; the rest are backhaul. Eutelsat W2 has only one DTH channel on transponder F1, and none on transponder F2
- Even under the more favorable coordination environment of Region 1, it appears that there is ***no actual DTH/DBS sharing*** that involves co-frequency and co-coverage service using 60 cm antennas
- SES's claims are not supported by the information submitted in its analysis, and are simply misleading
- Moreover, they are irrelevant - especially given the expertise of the FCC and US operators in analyzing spectrum sharing issues

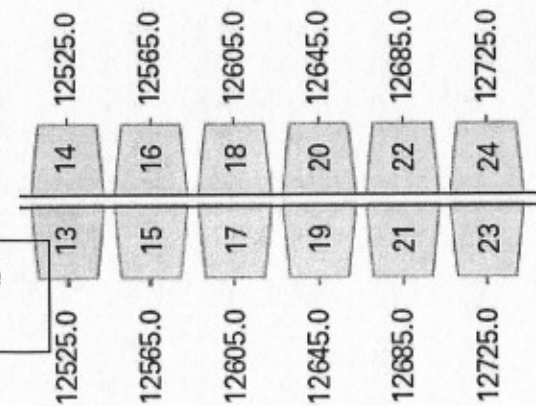
Astra 3A © Lyngemark Satellite, last updated 2004-07-20 - <http://www.lyngsat.com/astra3a.html>

Freq. Tp	Provider Name Channel Name	Video Encryption	SR - FEC SID - VPID	NID - TID Audio	Beam	Source Updated
12512 H tp 13	(feeds)	DVB	6111 - 3/4		Germany	Naporex 040209
12514 V tp 14	(DBP feeds)	DVB	6111 - 3/4		Germany	Fabrizio 030411
12521 H tp 13	(feeds)	DVB	6111 - 3/4		Germany	DX-Ampy 040301
12522 V tp 14	(DBP feeds)	DVB	4200 - 3/4		Germany	L Swaan 021206
12528 V tp 14	(DBP feeds)	DVB	4200 - 3/4		Germany	L Swaan 021202
12530 H tp 13	(feeds)	DVB	6111 - 3/4		Germany	DX-Ampy 040301
12534 V tp 14	(DBP feeds)	DVB	4200 - 3/4		Germany	R Carman 021202
12539 H tp 13	(feeds)	DVB	6111 - 3/4		Germany	DX-Ampy 040301
12540 V tp 14	(DBP feeds)	DVB	4200 - 3/4		Germany	Z Marchewka 031216
12552 H tp 15	(feeds)	DVB	6111 - 3/4		Germany	Bryce 040501
12561 H tp 15	(feeds)	DVB	6111 - 3/4		Germany	DX-Ampy 040531
12565 V tp 16	Kabel Deutschland	A P DVB Nagravision 2	27500 - 3/4	61441-10000	Germany	R Eckendorff 040628
12576 H tp 15	(feeds)	DVB	13333 - 7/8		Germany	DX-Ampy 040531
12605 H tp 17	Fish video	DVB	27500 - 3/4 50301 - 821	61441-10005 822	Germany	W Zaremba 040714
12605 V tp 18	Kabel Deutschland	A P DVB Nagravision 2	27500 - 3/4	61441-10004	Germany	R Eckendorff 040717
12645 V tp 20	(feeds)	DVB	27500 - 3/4		Germany	Naporex 030607
12672 V tp 22	(feeds)	DVB	6111 - 3/4		Germany	DX-Ampy 040201
12690 V tp 22	(feeds)	DVB	6111 - 3/4		Germany	DX-Ampy 040206
12700 V tp 22	(feeds)	DVB	2995 - 3/4		Germany	Naporex 030607
12717 V tp 24	RTL Group	A	DVB	13022 - 3/4	1-1	
	RTL Österreich	A T F		28800	201	202 G
	Vox Österreich	A T F		28805	301	302 G
	RTL 2 Österreich	A T F		28810	401	402 G
	Super RTL Österreich	A T F		28815	501	502 G

Does not appear that these frequencies are in use on Astra 1G






Astra 3A (23.5E) Programming and Freq. Plan



Band G

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Eutelsat W2 © Lyngmark Satellite, last updated 2004-07-20 - <http://www.lyngsat.com/ew2.html>

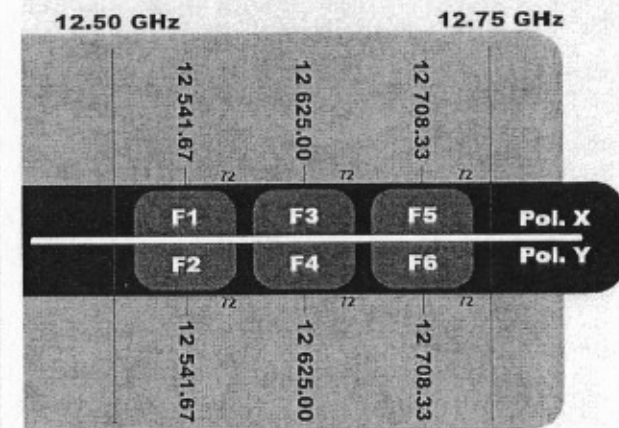
Freq. Tp	Provider Name Channel Name	Video Encryption	SR - FEC SID - VPID	NID - TID Audio	Beam	Source Updated
12509 H tp F1	(Enex feeds) (A)	DVB	5632 - 3/4		Europe	D Shimoni 981120
12517 H tp F1	(Enex feeds) (B)	DVB	5632 - 3/4		Europe	L Stouten 981119
12524 H tp F1	(Enex feeds) (C)	DVB	5632 - 3/4		Europe	D Shimoni 981120
12532 H tp F1	(Enex feeds) (D)	DVB	5632 - 3/4		Europe	L Stouten 981119
12537 V tp F2	(feeds)	DVB	6000 - 2/3		Europe	P Pani 040519
12540 H tp F1	(Enex feeds) (E)	DVB	5632 - 3/4		Europe	Anonymous 981121
12547 H tp F1	(Enex feeds) (F)	DVB	5632 - 3/4		Europe	Anonymous 981121
12555 H tp F1	(Enex feeds) (G)	DVB	5632 - 3/4		Europe	Anonymous 981121
12562 H tp F1	(Enex feeds) (H)	DVB	5632 - 3/4		Europe	Anonymous 981121
12568 H tp F1	 SIC Internacional	A	DVB	2894 - 3/4 1 - 308	0-1 256 P	Europe N Schlammer 040706
12608 H tp F3	 SNAI Sat	A	DVB	27500 - 2/3	1-1	Europe T Viererbe 040521
	Unire 1		PowerVu	1 1160 1120 I		
	Unire 2		PowerVu	2 1260 1220 I		
	(feeds)			3 1760 1720		
	SNAI Sat	A	F	4 1460 1420 I		
	Toscana Channel	A	F	7 1560 1520 I		
	Rete Capri	A	F	8 1860 1820 I		
	(Italia 9 Network feeds) (feeds)			10 1360 1320 11 1660 1620		
12610 H tp F3			DVB	6111 - 3/4	4369-1	Europe James A 030604
	La 7	A T	F	1 257 258 I		
	MTV Italia	A T	F	2 513 514 I		
12633 V tp F4	 RTK 1 Sat	A	DVB	4883 - 1/2 1 - 308	0-1 256 AI	Europe RTK 020912
	Radio Kosova	A	F	1 257 AI		
12642 H tp F3	(Enex feeds) (S)	DVB	5632 - 3/4		Europe	Shibolet 030421
12645 V tp F4	(feeds)	DVB	5632 - 3/4		Europe	K Gilmour 030517
12650 H tp F3	(Enex feeds) (T)	DVB	5632 - 3/4		Europe	Shibolet 030421
12650 V tp F4					Europe	A Cardoso 040602

SES calculates C/I of > 30 dB



Eutelsat W2 (16E)

Programming and Freq. Plan

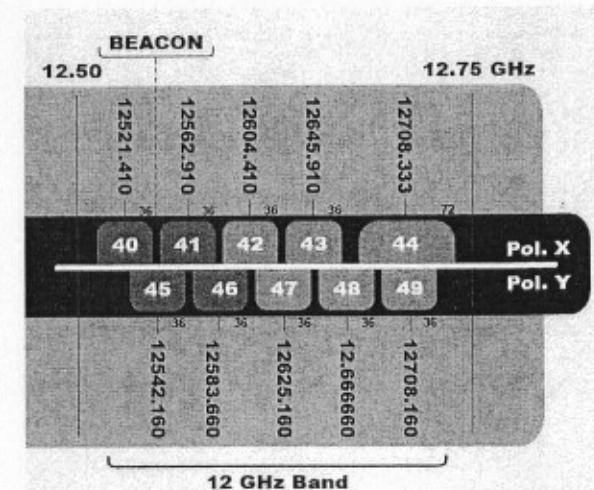


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Eutelsat II F3 (21.5E-incl 3.9°)

Programming and Freq. Plan

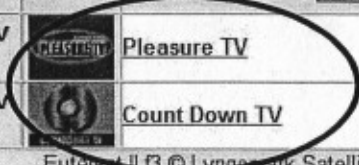


Eutelsat II F3 © Lyngemark Satellite, last updated 2004-07-20 - <http://www.lyngsat.com/e2f3.html>

Freq. Tp	Provider Name Channel Name	Video Encryption	SR - FEC SID - VPID	NID - TID Audio	Beam	Source Updated
12506 H tp 40	(BBC feeds) (c1)	DVB	4224 - 7/8		wide east	FeedManiac 031212
12512 H tp 40	(BBC feeds) (c2)	DVB	4224 - 7/8		wide east	Anonymous 031213
12518 H tp 40	(BBC feeds) (c3)	DVB	4224 - 7/8		wide east	Anonymous 031213
12525 H tp 40	(BBC feeds) (c4)	DVB	4224 - 7/8		wide east	FeedManiac 031212
12531 H tp 40	(BBC feeds) (c5)	DVB	4224 - 7/8		wide east	Anonymous 031213
12537 H tp 40	(BBC feeds) (c6)	DVB	4224 - 7/8		wide east	Anonymous 031213
12549 H tp 41	(BBC feeds)	DVB	5632 - 3/4		wide west	J Fuller 010622
12558 H tp 41	(BBC feeds)	DVB	5632 - 3/4		wide west	Anonymous 010710
12568 H tp 41	(BBC feeds)	DVB	5632 - 3/4		wide west	A Saydam 010621
12577 H tp 41	(BBC feeds)	DVB	5632 - 3/4		wide west	J Fuller 010622
12694 V tp 49	(feeds)	DVB	4094 - 1/2		wide east	K Gilmour 020320
12701 V tp 49					wide east	N Stanislav 040626
12720 V tp 49	Pleasure TV	A DVB	3255 - 3/4 -- 512	?-? 768 I	wide east	S Evans 040717
12726 V tp 49	Count Down TV	A DVB	2172 - 3/4 1 - 100	?-? 101 I	wide east	S Evans 040717

Eutelsat II F3 © Lyngemark Satellite, last updated 2004-07-20 - <http://www.lyngsat.com/e2f3.html>

Carried on Hot Bird 3 at 13E



Off-Axis Isolation for Receive Antenna Size vs. Orbital Spacing



Nominal Orbital Spacing, deg.

	4.5°	6.0°	9.0°
Receive Antenna Size, cm			
45	21.5 ³	25.3	29.7 ¹
60	24.7	27.8 ²	-
75	26.7	29.8 ²	-
90	28.2	31.4 ²	-

roughly equivalent orbital sep. vs. dish size

- 1 Current Region 2 BSS
- 2 Typical Region 1 BSS and FSS
- 3 SES Proposed

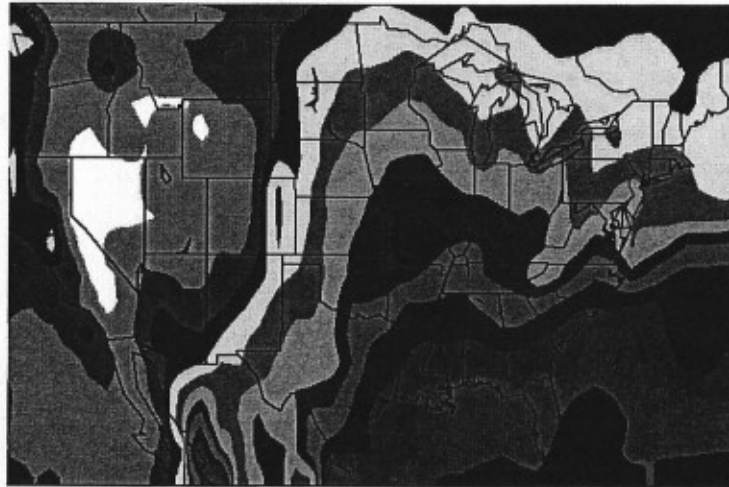
BO.1213 Reference Pattern

Rain Rates

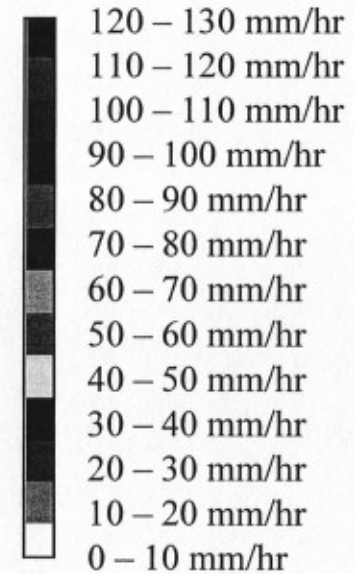


Europe has lower rain rates than the US (ITU Rec. 618-8)

US



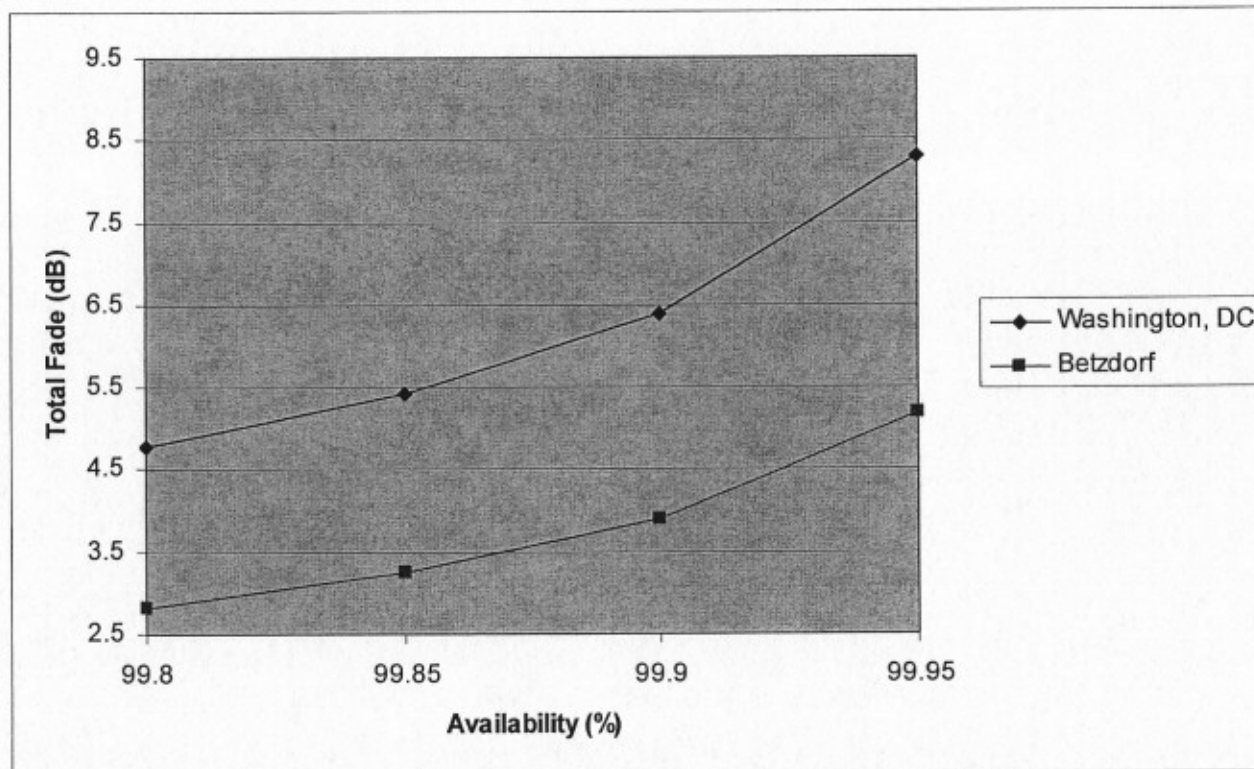
Europe



Rain Attenuation



Example: Washington, DC has about 2.5 dB more downlink attenuation due to rain than Betzdorf at 99.9% availability



Conclusions



- SES has long claimed sharing of co-coverage, co-frequency DBS/DTH satellites operating in Europe with less than 4.5 degrees spacing
- DIRECTV does not consider Region 1 examples relevant to the case in question. Regardless, SES's examples always boil down to one SES satellite coordinating with another (Astra 3A and Astra 1G). And in the instant case, DTH sharing with backhaul or inclined satellites
- This in no way represents the general case of coordination between two independent DTH networks spaced less than 4.5 degrees or is applicable to our case
- The Commission should not be distracted by the misleading claims and analysis in SES's most recent filing