WILTSHIRE & GRANNIS LLP

June 2, 2011

BY ELECTRONIC FILING

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

Re: *IB Docket No. 06-123*

Dear Ms. Dortch:

On June 1, 2011, Stacy Fuller, Jack Wengryniuk, and undersigned counsel representing DIRECTV, Inc. ("DIRECTV") met with Robert Nelson, Stephen Duall, Lynne Montgomery, and (by phone) Andrea Kelly of the Commission's International Bureau with respect to the above referenced proceeding. DIRECTV focused upon the need to apply protection criteria for the Direct Broadcast Satellite ("DBS") service against space path interference from 17/24 GHz BSS systems at the edge of each "cluster" of operating U.S.-licensed DBS satellites, rather than from the current position of any particular operating DBS satellite. Such an approach is consistent with international protections currently applicable to DBS clusters. As discussed below, the wrong outcome in this proceeding could inadvertently compromise the orbital resources available to U.S. DBS operators under international rules, and thereby limit future avenues for innovation in a service upon which tens of millions of Americans have come to depend.

The unique space path issues in this proceeding result from the combination of two highly unusual factors. First, 17/24 GHz BSS downlinks will operate on the same spectrum as existing DBS uplinks. Second, DBS (known internationally as Broadcasting Satellite Service ("BSS")), operates in one of the select few satellite bands that are governed by an international Plan administered by the International Telecommunication Union ("ITU"). In order to appreciate DIRECTV's concern with space path interference from 17/24 GHz BSS operations – and the safeguards it proposes – one must understand the interplay of these two factors.

Under the ITU's BSS Plan, certain technical parameters of BSS operations are specified and each administration is assigned specific frequency channels at one or more agreed orbital locations for operations consistent with those parameters. By creating the Plan in this manner, the ITU was able to define the interference environment that would exist for all assignments in the Plan. Any administration proposing to operate a DBS system with parameters that differ from those of the Plan must propose a modification and, if that proposed modification increases the interference environment for other Plan assignments by more than a specified amount, that administration must seek the agreement of those administrations whose assignments would be affected. The original protections of the BSS Plan apply in perpetuity, unless an administration

grants agreement to allow a proposed modification, at which point the protection baseline is reset at the level of interference accepted from such a modification.

Under the BSS Plan, the United States has been assigned all 32 DBS channels at eight orbital locations. In this situation, the Plan also affords the U.S. the flexibility to operate multiple DBS satellites within ± 0.2° of the orbital location specified in the Plan, and all systems within this "cluster" are essentially considered as a "single system" for purposes of the protection conferred by the Plan. Significantly, the initial determination of whether a proposed modification to the BSS Plan would affect a cluster is determined under the ITU rules based on the cluster's Plan assignments – *which fall at the edge of each cluster.*[1] It would therefore be a departure from current international practice were the Commission to analyze interference without considering its effect at the cluster edge.

U.S. DBS operators have benefited from the flexibility afforded by the cluster, relocating satellites within the clusters over time in order to, for example, accommodate spot beam satellites that support local-into-local service or next-generation satellites capable of making more intensive use of valuable spectrum.[2] Without the flexibility to locate multiple satellites across the cluster, these critical service enhancements could not have been achieved.

All parties in this proceeding agree that a small amount of orbital separation (on the order of 0.2° to 0.3°) is required to protect U.S. DBS satellites from space path interference caused by 17/24 GHz BSS satellites. DIRECTV has argued that this separation should be determined from the edge of each DBS cluster assigned to the U.S. in order to maintain the integrity and flexibility of these clusters.[3] If this separation is instead determined solely using the position of "operating" DBS satellites, a situation could occur in which the U.S. *would lose access to part of the internationally protected cluster*.

As an example, consider a cluster with the current characteristics of the one at 110° W.L. location, where three DBS satellites operate between 109.8° W.L. and 110.2° W.L. The easternmost satellite in this cluster is currently positioned at 110.0° W.L. If the required separation between a 17/24 GHz BSS satellite and operating DBS satellites is specified as 0.2°, a 17/24 GHz BSS satellite could be positioned at 109.8º W.L. – *i.e.*, at the eastern edge of the

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[1] *See* ITU Radio Regulations, AP 30A-138, Annex 4, § 1 (discussing criteria for determining when coordination with BSS Plan assignments is required). The BSS Plan anticipated that odd channels and even channels, which operate on opposite polarizations, would be located on opposite ends of the cluster.

[2] Attachment 1 hereto illustrates the movement of DBS satellites within the 110° W.L. cluster over the period from April 2006 to June 2007.

[3] For similar reasons, DIRECTV has argued that any PFD coordination trigger should be determined with reference to the cluster edge.

cluster and co-located with the original U.S. Plan assignments at that location. In this scenario, U.S. DBS operators would not be able to deploy satellites within the half of the protected cluster between 110.0° W.L. and 109.8° W.L. Another example arises at the U.S.-assigned cluster at 148° W.L., where U.S. DBS satellites have operated in the past but do not operate at present.[4] If protection applies only as measured from an operational DBS satellite, that entire cluster could be lost should a 17/24 GHz BSS system be located in its midst.

Losing even a portion of an assigned cluster would have seriously detrimental effects on the U.S. DBS industry. If there is no room available for operation of additional satellites within a cluster, a U.S.-licensed DBS operator could be forced to delay or forego technological advancements. Had this occurred in the past, it would have affected new services such as the delivery of local signals using spot beam satellites. There is no telling what future advancements could be compromised in such a scenario.

The alternative – locating a satellite just outside the cluster – would be worse yet. Under the rules of the BSS Plan, such a satellite would be considered to be a "new" DBS system that is interfering with the "single system" of DBS satellites within the cluster. In practice, such a satellite could operate without affecting the satellites located within the cluster by, for example, operating on different frequencies or aiming its spot beams to different portions of the country. However, for purposes of the BSS Plan, the new DBS system would reset the interference baseline for that cluster at a very high level of interference and thus effectively compromise the protection that would otherwise have been afforded by the BSS Plan had the new satellite been able to operate within the cluster and be considered as part of the existing operating system.

Were this to occur, other administrations would then be free to modify the BSS Plan to add new DBS orbital locations in close proximity to U.S. clusters, and would be under no obligation to make the operational accommodations that the U.S. operator had made to protect its own system.[5] As a result, the potential (but not actual) interference determined to be caused under the rules of the BSS Plan by the U.S. satellite operating outside the cluster would open the door to real interference from non-U.S. DBS satellites.

Safeguarding U.S. DBS clusters would not harm 17/24 GHz BSS systems. As even SES Americom recognizes, given the presumptive four-degree spacing grid adopted by the Commission, which includes thirty-five potential locations, it would be the extremely rare case in which a 17/24 GHz BSS system proposed to serve the U.S. from a location in close proximity

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[4] The U.S. operator, DISH Operating L.L.C., anticipates that it will be able to relocate a DBS satellite to this cluster no earlier than June 2012. *See* Letter from Pantelis Michalopoulos to Marlene H. Dortch, IBFS File No. SAT-MOD-20091027-00114 (dated May 10, 2010).

[5] This principle is illustrated in the Attachment 2 hereto.

to a U.S. DBS cluster.[6] In fact, only two clusters assigned to the U.S. under the BSS Plan (119° W.L. and 175° W.L.) fall on that grid.[7] Thus, a rule designed to protect such clusters would be unlikely to have any effect on the options available to a 17/24 GHz BSS operator looking to enter the U.S. market. However, in the unlikely event that a 17/24 GHz BSS applicant did seek to locate its satellite in such close proximity, failure to protect U.S. clusters would put at risk a DBS service to which over 34 million Americans subscribe. There is no policy rationale for preserving an option unnecessary to support entry while creating a threat to an existing service provided to tens of millions across the country.

DIRECTV's proposal does not extend to clusters assigned to other administrations under the ITU's BSS Plan.[8] Those clusters are protected against space path interference from U.S.-licensed 17/24 GHz BSS systems by the ITU's frequency coordination rules – which, as mentioned above, protect the Plan assignments at the edge of the cluster. This is the same mechanism upon which U.S. DBS systems must rely for protection against non-U.S.-licensed 17/24 GHz BSS systems that do not seek to serve the United States. Moreover, if another administration concluded that its own DBS clusters required less protection against 17/24 GHz BSS interference, the Commission need not deny market entry by a 17/24 GHz BSS operator in the interest of safeguarding the non-U.S. cluster. For example, Canada has authorized Ciel Satellite Limited Partnership ("Ciel") to operate a 17/24 GHz BSS system at 91° W.L.[9] That position is located in the middle of a cluster assigned to Canada at which three Canadian-authorized DBS satellites currently operate. DIRECTV anticipates that the location of Ciel's satellite will have to be modified somewhat in light of the existing congestion at this slot, but Canadian regulators may authorize its operation with less than 0.2° spacing from the cluster's edge. In such a case, there is no reason that the Commission should prohibit Ciel from serving the U.S. market based solely on its proximity to the Canadian cluster as approved by the Canadian administration. DIRECTV's proposal would not have this effect.

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[6] *See* Letter from Karis A. Hastings to Marlene H. Dortch, IB Docket No. 06-123, at 2 (dated May 26, 2011). This possibility has been made even less likely by the recent decision of EchoStar Satellite Operating Corporation to tender five 17/24 GHz BSS licenses for cancellation. *See* Letter from Pantelis Michalopoulos to Marlene H. Dortch, IB Docket Nos. SAT-LOA-20020328-00050, -00051, and 00052; SAT-LOA-20070105-00001 and -00003 (dated May 24, 2011).

[7] Attachment 3 hereto compares the four-degree "on grid" locations for 17/24 GHz BSS systems against the cluster locations assigned to the U.S. under the BSS Plan.

[8] We would note, however, that only two clusters assigned to other administrations fall on the Commission's four-degree grid for 17/24 GHz BSS systems – Canada at 91° W.L. and Mexico at 127° W.L. Thus, the opportunities for overlap with such clusters remain very limited.

[9] A copy of this authorization is available at http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf09019.html.

For the foregoing reasons, DIRECTV urges the Commission to apply safeguards against 17/24 GHz BSS space path interference at the edge of each DBS cluster assigned to the United States.

Respectfully submitted,

/s/

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Counsel for DIRECTV, Inc.

Attachments

cc: Zac Katz
Angela Giancarlo
Louis Peraertz
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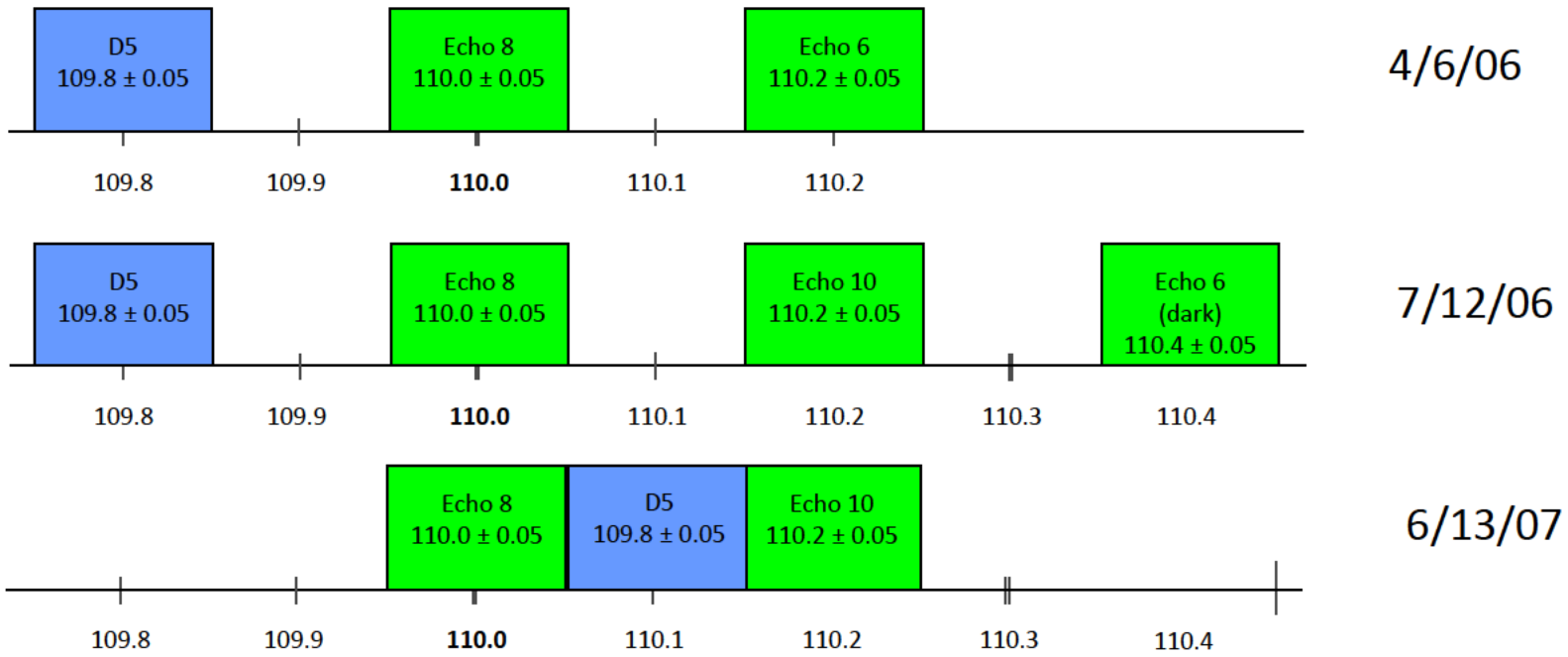
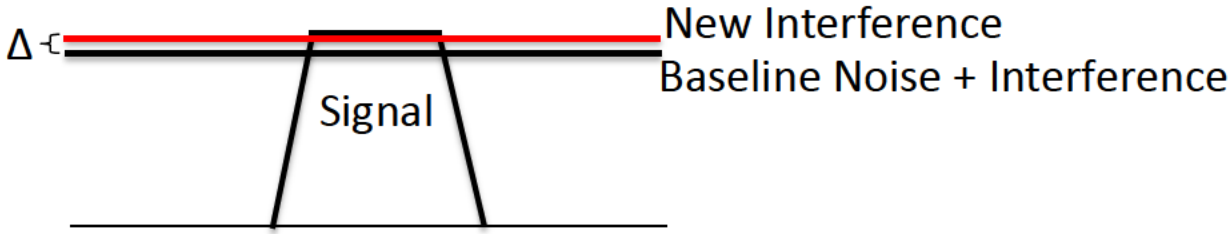
Attachment 1
110W DBS Cluster Configurations



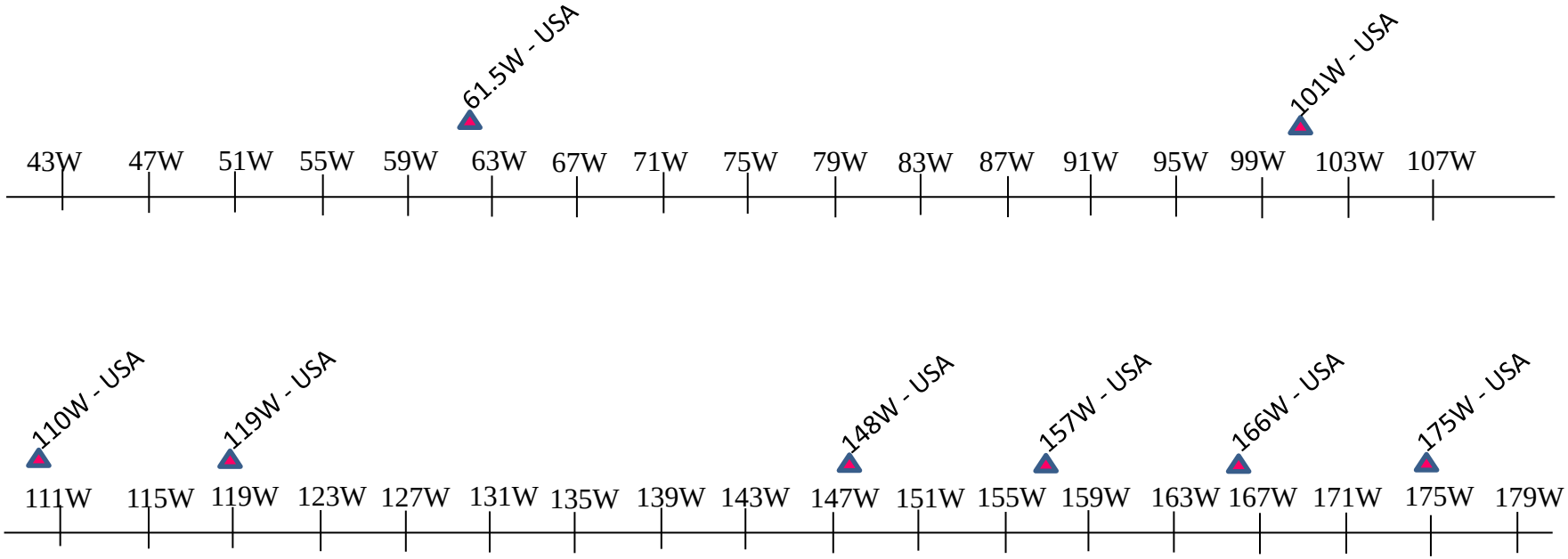
Attachment 2
BSS Plan Interference Calculation

Normal operations inside the cluster

Impact of operating just outside the cluster



Attachment 3
17/24 GHz BSS Appendix F Grid vs U.S. DBS Cluster Locations



▲ = current 12/17 GHz BSS cluster assignments