

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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Federal Communications Commission
Office of Secretary

In the Matter of)

SPECTRUM FIVE LLC)

Petition for Declaratory Ruling)
To Serve the U.S. Market Using)
BSS Spectrum from the 114.5° W.L.)
Orbital Location)
_____)

File Nos. SAT-LOI-20050312-00062
SAT-LOI-20050312-00063

Received

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Policy Branch
International Bureau

REPLY OF DIRECTV ENTERPRISES, LLC

In its initial Opposition,¹ DIRECTV Enterprises, LLC (“DIRECTV”) demonstrated that the operations from a new Direct Broadcast Satellite (“DBS”) slot at 114.5° W.L. proposed by Spectrum Five LLC in the above-captioned Petition for Declaratory Ruling (“S5 Petition”) would cause harmful interference to the service provided by DIRECTV to millions of American subscribers. Spectrum Five responds, curiously, both that DIRECTV failed to present a technical analysis of the specific system proposed *and* that DIRECTV presented a misleading technical analysis.² In any event, Spectrum Five concludes that potential interference issues can be easily resolved during coordination, and that the Commission should grant its petition based on this assumption – this despite having failed to so much as call DIRECTV to initiate discussions in more

¹ Opposition of DIRECTV Enterprises, LLC, File Nos. SAT-LOI-20050312-00062/63 (May 16, 2005) (“DIRECTV Opposition”).

² Consolidated Response of Spectrum Five LLC, File Nos. SAT-LOI-20050312-00062/63 (June 1, 2005) (“S5 Response”).

than seven months since the Netherlands filed for modification of the Region 2 Plan to create a slot at 114.5° W.L.

None of Spectrum Five's claims are correct. Contrary to Spectrum Five's assertions, DIRECTV not only incorporated materials from prior proceedings that respond directly to the S5 Petition, but also used Spectrum Five's own analysis to highlight the magnitude of the interference challenge created by its proposal. Moreover, Spectrum Five's confidence in the coordination process appears to be based upon such "readily available" mitigation techniques as increasing the size of DIRECTV's subscriber antennas – *i.e.*, retrofitting millions of DIRECTV dishes nationwide.

Not surprisingly, the Commission has wisely declined to place the cart before the horse, as it has never granted market access to a non-U.S.-licensed DBS system that had not completed coordination with U.S. operators. Given the obvious harmful interference potential of Spectrum Five's proposal, there is no reason for the Commission to make an exception to this policy in this case.

A. DIRECTV Addressed the Technical Merits of the S5 Petition

Because Spectrum Five's proposal is very similar to other proposals to use short-spaced DBS slots to serve the U.S. market, DIRECTV incorporated by reference the voluminous technical analysis it has submitted to the Commission on the interference created by such "tweeners."³ But after doing so, DIRECTV also discussed the particular

³ See DIRECTV Opposition at 2.

technical showing in the S5 Petition.⁴ Spectrum Five argues that DIRECTV has failed to “substantiate” its interference concerns.⁵

Section 25.114(b) of the Commission’s rules provides that an application for satellite authorization “must constitute a concrete proposal for Commission evaluation.”⁶ In addition, Section 25.114(d)(13)(i) requires that an applicant whose DBS system parameters differ from the Region 2 Plan must provide a technical showing sufficient to demonstrate that “the proposed system could operate satisfactorily if all assignments in the [Region 2 Plan] were implemented.”⁷ Thus, Spectrum Five has the burden to demonstrate that its system *as proposed* – not as it might be revised in the future as a result of coordination – could operate harmoniously with DBS systems already in the Region 2 Plan. Accordingly, contrary to Spectrum Five’s implied assertion, DIRECTV does not have the burden to show that there is no conceivable way in which Spectrum Five could operate that would adequately reduce interference levels. Rather, Spectrum Five must present a system with characteristics that demonstrably satisfy the Commission’s requirements.

Given this threshold issue, DIRECTV simply pointed out the obvious conclusion evident on the face of the S5 Petition: that interference levels resulting from Spectrum Five’s proposed operations would result in harmful interference to existing U.S. DBS systems. DIRECTV did so by identifying the large number of very high equivalent protection margin (“EPM”) degradation values shown in the Technical Appendix to the

⁴ See *id.* at 2-5.

⁵ S5 Response at i.

⁶ 47 C.F.R. § 25.114(b).

⁷ *Id.* at § 25.114(d)(13)(i).

S5 Petition.⁸ In response, Spectrum Five asserts that “[t]he single, narrow purpose of [the EPM figures generated by] MSPACE is to identify areas for negotiation in inter-system coordination.”⁹ While this may be true as far as it goes, it ignores the obvious fact that the larger the EPM degradation values, the more difficult coordination is likely to be. While Spectrum Five attempts to explain away a few select instances where EPM degradation is especially high, it has not even attempted to deal with all of the instances (cited by DIRECTV) in which the S5 Petition’s own data show degradation of 5 dB to 10 dB, or more.¹⁰

While belittling the utility of its own MSPACE analysis as an indicator of potential interference, Spectrum Five asserts that the proper analysis would involve consideration of the carrier-to-interference ratio (“C/I”).¹¹ Yet nowhere does Spectrum Five – which has the burden of demonstrating non-interference in the first place – actually present such an analysis.

DIRECTV has preliminarily conducted such an analysis. Not surprisingly – and just as one would expect based on the MSPACE analysis – the C/I values resulting from Spectrum Five’s proposed system are far worse than even Spectrum Five has identified as acceptable. As shown in the table below, in the 10 cities used as examples in S5

⁸ See DIRECTV Opposition at 2-4.

⁹ S5 Response at 9.

¹⁰ See DIRECTV Opposition at 3 (noting that there are 22 beams that would experience degradation of more than 10 dB and many more of between 5 dB and 10 dB).

¹¹ See, e.g., S5 Response, Technical Appendix at 1 (“The basic issue is whether the resulting C/Is as a consequence of interference from the Spectrum Five network are reasonable and do not cause unreasonable levels of interference”).

Petition's Technical Appendix,¹² the C/I values for DIRECTV 6 operating at 110° W.L. and DIRECTV 7S operating at 119° W.L. would be below 15 dB in many cities, including such major markets as New York, Los Angeles, Chicago, and San Francisco.

	LA	NY	MIA	SF	SEA	MIN.	CHI	Fargo	DAL	HOU
DIRECTV 6	11.4	13.8	10.7	11.7	13.5	15.6	14.8	13.3	13.5	14.5
DIRECTV 7S*	14.7	14.3	12.8	12.4	18.6	20.6	14.0	14.7	18.4	15.6

* CONUS beam

C/I Values for S5 Proposed Operations

Even the paradigm offered by Spectrum Five (*i.e.*, the protection values used in replanning the BSS band in Regions 1 and 3) required C/I protection ratios of 21 dB.¹³ Spectrum Five's proposed operations would reduce DIRECTV's C/I levels well below this minimum safeguard – in fact, by at least a factor of four in the markets discussed above. In light of these figures, there can be little doubt why Spectrum Five failed to include the C/I analysis it purports to favor.¹⁴ Moreover, Spectrum Five fails to recognize other aspects of the Region 1/3 replan, such as the hard limit established for power flux-density (“PFD”) levels created by modification to the Plan. This level, which cannot be exceeded in Regions 1 and 3, has been set at $-103.6 \text{ dBW/m}^2/27 \text{ MHz}$, or approximately 58.8 dBW EIRP.¹⁵ Because Region 2 has no such limits, Spectrum Five proposes to operate a power levels that would exceed this PFD limit in half of the cities

¹² See S5 Petition, Technical Annex at 9 (Tables 7 and 8).

¹³ See *id.* It is important to note that the Regions 1 and 3 replan was based on a C/I of 21 dB *in the aggregate*. The single-entry value was 26 dB.

¹⁴ It is also worth noting that DIRECTV responded directly to the S5 Petition's assertion that the provision of BSS from satellites spaced substantially less than nine degrees apart is already common in Europe, incorporating by reference an analysis submitted in another proceeding that demonstrated the falsity of this claim. See DIRECTV Opposition at 4-5. Neither Spectrum Five nor SES Americom has attempted to rebut DIRECTV's showing.

¹⁵ See ITU Radio Regulations, Appendix 30, Annex 1, Section 1.

offered as examples in its petition for 8PSK operations.¹⁶ Once again, even the paradigm Spectrum Five urges on the Commission undercuts its position.

B. Coordination With U.S. Operators Must Precede Market Access

Spectrum Five encourages the Commission to grant market access without waiting to see whether its system can be coordinated successfully with U.S. systems already serving millions of viewers. This would truly put the cart before the horse in a way that the Commission has never done before. Spectrum Five's attempts to square its request with past Commission precedent are erroneous. Moreover, the coordination strategies it hypothesizes would greatly disrupt DBS service in the U.S. and impose huge costs on U.S. operators.

Spectrum Five asserts that, because the Commission "routinely grants applications by U.S. DBS operators prior to completion of international coordination and successful modification of the Region 2 Plan," the Commission should also grant landing rights to non-U.S.-licensed DBS operators in the same situation.¹⁷ However, one of the key attributes of a U.S. DBS slot that does not depend upon successful coordination is the right to serve the U.S. market. Non-U.S. slots do not share this attribute – unless and until they have been successfully coordinated and placed into the Region 2 Plan. At a minimum, therefore, completion of the agreement-seeking process with U.S. operators is a necessary precursor to a grant of U.S. market access from a foreign slot – a conclusion

¹⁶ See S5 Petition, Technical Appendix at 9.

¹⁷ S5 Response at 5.

reflected in the fact that the Commission has never granted market access from a non-U.S. DBS slot absent such coordination.¹⁸

Spectrum Five seeks support in a selective citation to the Commission's statement in the *DBS Rules Order* that the international coordination process and Commission rules "should provide adequate protection of U.S. DBS systems."¹⁹ However, that quotation is pulled from the Commission's decision not to adopt DBS receive earth station antenna performance criteria. There is nothing in that discussion to indicate that the Commission contemplated granting market access to non-U.S. systems before the "adequate protection" provided by coordination with U.S. systems had been successfully completed. As discussed above, the Commission's rules require a sufficient showing by a new entrant that its proposed system can operate within the confines established by existing systems in the Region 2 Plan. The Commission should not allow Spectrum Five to bypass this important safeguard where its own analysis demonstrates the likely difficulty of coordination.

Based on the contents of Spectrum Five's filings in this proceeding, the Commission should find no reason to assume that such a coordination effort would be successful. Moreover, the mitigation techniques proposed by Spectrum Five include "minimal increases (*e.g.*, merely three centimeters)" in the size of DIRECTV subscriber antennas.²⁰ Of course, DIRECTV has many millions of subscriber antennas already

¹⁸ Spectrum Five's citation of FSS cases in which the Commission granted market access while international coordination remained outstanding is consistent with this precedent, since U.S. coordination had been completed. *See, e.g., Telesat Canada*, 15 FCC Rcd. 24828, 24833 (Int'l Bur. 2000); *Televisa Int'l, LLC*, 13 FCC Rcd. 10074, 10078 (Int'l Bur. 1997).

¹⁹ S5 Response at 5 (citing *Policies and Rules for the Direct Broadcast Satellite Service*, 17 FCC Rcd. 11331 (2002) ("*DBS Rules Order*").

²⁰ S5 Response at 13 (citing Technical Appendix at 4).

deployed, making replacement with larger units a huge inconvenience for subscribers and a monumental expense for DIRECTV. Yet even after this expensive and time-consuming process, DIRECTV subscribers apparently would experience a 10% increase in service outages due to Spectrum Five's operations.²¹ Needless to say, it would not be reasonable for the Commission to anticipate that DIRECTV would reach a coordination arrangement based on such an approach.

Spectrum Five further asserts that its Petition should be granted to "ensure those [coordination] negotiations are pursued promptly."²² However, in more than seven months since the Netherlands filed for modification of the Region 2 Plan to create a slot at 114.5° W.L., Spectrum Five has never attempted to initiate discussions with DIRECTV. Moreover, although the Commission has officially invited operator-to-operator negotiations and provided a DIRECTV contact point, Spectrum Five has still failed to initiate any form of discussions in the three weeks since that invitation was sent.²³

In addition, Spectrum Five is but one of a growing number of proposals that would create new BSS orbital locations with less than nine-degree spacing from existing U.S. DBS slots. Faced with the prospect of attempting to coordinate with each of these operators – and trying to accommodate the potentially conflicting needs and approaches of each – DIRECTV petitioned the Commission to initiate a rulemaking to examine whether such "tweeners" can be accommodated, and if so under what circumstances.

²¹ *Id.*

²² S5 Response at 6.

²³ See Letter from Kathryn O'Brien, FCC, to Head Frequency Planning and Coordination Section, Radiocommunication Agency Netherlands (May 19, 2005).

Essentially, this approach would accomplish “coordination by rule” much as the Commission has done through its blanket licensing rules in the Ka band.²⁴ If successful, such an approach would create greater predictability and greatly streamline the entry process. Spectrum Five has offered no reason for the Commission not to proceed in this manner rather than through a series of individual and possibly conflicting coordination negotiations.

* * *

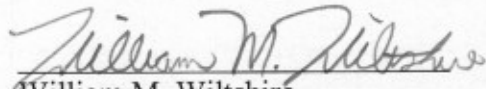
²⁴ See 47 C.F.R. § 25.138.

If Spectrum Five truly believes that coordination should not be difficult, it is surprising that it has not yet attempted to initiate that process with DIRECTV. Only after that process has been successfully completed will Spectrum Five be in a position to propose a system with parameters that demonstrably could co-exist with other U.S. filings in the Region 2 Plan, and thereby satisfy the requirements of Section 25.114(c)(13)(i). In the absence of a "coordination by rule" regime, the Commission should, consistent with its approach to date, defer granting market access absent successful coordination with all U.S. DBS operators. Accordingly, the S5 Petition should be denied.

Respectfully submitted,

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Dated: June 8, 2005

ENGINEERING CERTIFICATION

The undersigned hereby certifies to the Federal Communications Commission as follows:

- (i) I am the technically qualified person responsible for the engineering information contained in the foregoing Opposition,
- (ii) I am familiar with Part 25 of the Commission's Rules, and
- (iii) I have either prepared or reviewed the engineering information contained in the foregoing Opposition, and it is complete and accurate to the best of my knowledge and belief.

Signed:

/s/

David Pattillo

June 8, 2005

Date

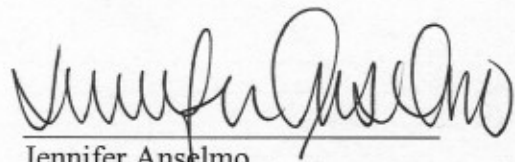
CERTIFICATE OF SERVICE

I hereby certify that, on this 8th day of June, 2005, a copy of the foregoing Reply of DIRECTV Enterprises, LLC was sent by U.S. mail, postage prepaid, to:

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