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

MAY - 9 2001

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)
)
 Amendment of Parts 2 and 25 of the)
 Commission's Rules to Permit Operation)
 of NGSO FSS Systems Co-Frequency with)
 GSO and Terrestrial Systems in the Ku-)
 Band Frequency Range;)
)
 Amendment of the Commission's Rules)
 to Authorize Subsidiary Terrestrial Use)
 of the 12.2-12.7 GHz Band by Direct)
 Broadcast Satellite Licensees)
 and Their Affiliates; and)
)
 Applications of BroadWave USA, PDC)
 Broadband Corporation, and Satellite)
 Receivers, Ltd. to Provide a Fixed Service)
 in the 12.2-12.7 GHz Band)

ET Docket No. 98-206
 RM-9147
 RM-9245

REPLY OF DIRECTV, INC.

DIRECTV, INC.

Gary M. Epstein
 James H. Barker
 LATHAM & WATKINS
 1001 Pennsylvania Avenue, N.W.,
 Suite 1300
 Washington, D.C. 20004-2505
 (202) 637-2200

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REPLY OF DIRECTV, INC.

DIRECTV, Inc. ("DIRECTV") hereby replies to the Oppositions¹ filed in connection with its Petition for Reconsideration of certain Commission actions and findings in the Report and Order ("Order") in the above-captioned proceeding.

¹ See Opposition of the Boeing Company to Petitions for Reconsideration (Apr. 24, 2001) ("Boeing Opposition"); Northpoint Technology, Ltd., and Broadwave USA, Inc., Opposition to Petitions for Reconsideration of First Report and Order (Apr. 24, 2001) ("Northpoint Opposition"); Opposition of MDS America, Incorporated to Various Petitions for Reconsideration of the Commission's First Report and Order (Apr. 24, 2001) ("MDS America Opposition"). See also Pegasus Broadband Corporation, Comments to Petitions for Reconsideration (Apr. 24, 2001) ("Pegasus Comments").

DIRECTV, EchoStar Satellite Corporation ("EchoStar") and the Satellite Broadcasting & Communications Association ("SBCA") each have sought reconsideration of the Commission's finding that sharing between a new proposed mass-market terrestrial point-to-multipoint Multichannel Video and Data Distribution Service ("MVDDS") and Direct Broadcast Satellite ("DBS") systems in the 12.2-12.7 GHz band (the "12 GHz Band") is technically feasible. These petitions have highlighted a number of deficiencies in the Order that require reconsideration, including:

- the Commission's actions in the Order constitute a complete about-face in terms of Commission spectrum management policy with regard to DBS, and undercut the viability of the one service which, after decades of nurturing by Congress and the Commission, is finally emerging as a full-fledged competitor to incumbent cable monopolists in many markets around the country;
- the sharing of spectrum the Commission seeks to accomplish at 12 GHz between DBS systems, new NGSO FSS satellite systems, and proposed terrestrial MVDDS systems, all of which will be ubiquitously deployed throughout the country, is wholly unprecedented and utterly inconsistent with the Commission's analyses of analogous terrestrial/satellite sharing issues in other services;
- the Commission's conclusion that proposed MVDDS/DBS sharing is feasible is unsupported by reasoned analysis; the Order fails to address a tremendous amount of technical data and analysis supplied by the DBS operators that show that proposed MVDDS/DBS sharing is not feasible, and that many of the *forty million* U.S.

- consumers who use and rely upon satellite-delivered programming services will suffer harmful interference from proposed MVDDS operations;
- given the presence of harmful interference to DBS consumers as a baseline proposition, it is illogical, and arbitrary and capricious, for the Commission to base a finding that sharing is feasible on a variety of speculative mitigation techniques that remain to be considered in a pending proceeding; and
 - the Order does not meaningfully consider or explain why, if the creation of a potential MVDDS service is warranted, prospective MVDDS operators cannot be directed to other frequency bands that currently are lightly used, and that have been expressly allocated for the precise uses that are encompassed by the proposed MVDDS.

Since the filing of these petitions for reconsideration, substantial new evidence provided by an objective third party casts further doubt on the prospects of a secondary MVDDS system sharing the 12 GHz Band successfully with DBS systems. The MITRE Corporation, an independent entity retained by the Commission pursuant to Congressional directive, has now released its report regarding the feasibility of spectrum sharing between a ubiquitously deployed MVDDS service and tens of millions of DBS consumers.² While DIRECTV will offer its detailed assessment of the MITRE Report during the pleading cycle that has been established by the Commission for comment,³ the report is clear and unequivocal in its very first conclusion that

² The MITRE Corporation, "Analysis of Potential MVDDS Interference to DBS in the 12.2-12.7 GHz Band" (April 2001) ("MITRE Report"). To the extent that the Commission has not already done so, DIRECTV hereby incorporates the MITRE Report into the record in this proceeding by reference.

³ *Public Notice*, "Comments Requested on The MITRE Corporation Report on Technical Analysis of Potential Harmful Interference to DBS from Proposed Terrestrial Services in the 12.2-12.7 GHz Band (ET Docket 98-206)," DA 01-933 (rel. April 23, 2001).

"MVDDS sharing of the 12.2-12.7 GHz Band currently reserved for DBS poses *a significant interference threat* to DBS operation in many realistic operational situations."⁴ Although MITRE suggests certain mitigation options could be explored that might make sharing possible, there again is no record evidence at this point to suggest that any of the proposed techniques has been considered by the Commission or will be successful. Indeed, some of them, including towers located 100 to 200 meters above the level of DBS receiving antennas in the surrounding area, and invasive mitigation measures at a DBS customers' premises, appear to be non-starters out of the box. Simply put, if MVDDS/DBS sharing is possible "if and only if" such mitigation measures are adopted,⁵ as MITRE strongly concludes, then *sharing is not possible at 12 GHz*.

In the final analysis, MITRE poses a fundamental question: "*Do the potential costs of applying the necessary mitigatory measures, together with the impact of the residual MVDDS-to-DBS interference that might remain after applying such measures, outweigh the benefits that would accrue from allowing MVDDS to coexist with DBS in this band?*"⁶ On reconsideration, the Commission must answer this question with a resounding no: the benefits do not outweigh the costs. In opposing DIRECTV's petition, Northpoint did not have the benefit of reviewing MITRE's report, which plainly contradicts its light-handed dismissals of DBS operator interference concerns. But Northpoint itself does suggest that the Commission "should decline to create" a new MVDDS service at 12 GHz.⁷ On this point, DIRECTV and Northpoint emphatically agree.

⁴ MITRE Report at xvi, 6-1 (emphasis added).

⁵ *Id.* at xvii.

⁶ *Id.*

⁷ Northpoint Opposition at 2.

I. THE ORDER FAILS TO JUSTIFY THE CONCLUSION THAT SHARING BETWEEN SECONDARY PROPOSED POINT-TO-MULTIPOINT TERRESTRIAL, DBS AND NGSO FSS SERVICES IS FEASIBLE

Various petitions for reconsideration have highlighted the voluminous evidence submitted by the DBS operators in this proceeding that establishes the harmful interference into the DBS service that would be generated by the wide-scale deployment of Northpoint's proposed MVDDS system in the 12.2-12.7 GHz Band, and the fact that this evidence has gone substantively unaddressed by the Commission.⁸

Northpoint tries to sidestep this problem by presenting a list of citations to its own letters, pleadings and reports as proof that the Commission's sharing conclusion is "well reasoned" and "carefully considered."⁹ But such a list is no substitute for the reasoned decisionmaking that the Administrative Procedure Act¹⁰ requires. The Order fails as a legal matter to explain how or why the Commission has concluded that sharing between secondary terrestrial point-to-multipoint operations and DBS providers, in addition to DBS sharing with NGSO systems, is feasible.¹¹ And it is telling that Northpoint cannot point to any analysis of its filings – or of the filings of the DBS operators for that matter – actually provided by the Commission in the Order because there is none.

⁸ See DIRECTV Reconsideration Petition at 8-11; EchoStar Reconsideration Petition at 9-12; SBCA Reconsideration Petition at 7-11.

⁹ See Northpoint Opposition at 3 & Attachment A.

¹⁰ See 5 U.S.C. 706(2)(A).

¹¹ See, e.g., *Illinois Public Telecommunications Ass'n v. FCC*, 117 F.3d 693, *clarified on reh'g*, 123 F.3d 693 (D.C. Cir. 1997), *cert. denied*, 118 S.Ct. 1361 (1998) (Commission's "*ipse dixit* conclusion, combined with its failure to respond to contrary arguments resting on solid data, epitomizes arbitrary and capricious decisionmaking").

Northpoint also has no serious answer to petitioners' arguments that the Commission has failed to explore in any detail alternative frequency allocations to accommodate proposed MVDDS systems. In statements that are as cursory as the Order's treatment of this subject,¹² Northpoint's opposition merely reaffirms Northpoint's desire to use the 12 GHz Band because it "has particularly favorable transmission characteristics that make it more favorable for spectrum sharing than the lower MMDS wavelengths and more reliable in inclement weather than the higher LMDS wavelengths."¹³ But as with the statements in the Order, these unexplained assertions lack any justification. The LMDS, MDS, DEMS and 39 GHz bands, for example, have either more bandwidth or better propagation characteristics than the 12 GHz Band, all have been proven to support the commercial deployment of the type of point-to-multipoint system that Northpoint proposes, and all are as yet very lightly used.

As a matter of law, the Commission is obligated to explain why the introduction of Northpoint's proposed MVDDS service at 12 GHz serves the public interest better than authorizing Northpoint to operate in the variety of frequency bands that already have been expressly allocated for functionally identical terrestrial wireless services. The 12 GHz Band already is heavily encumbered and confronts significant spectrum management challenges – it is populated by DBS systems and tens of millions of DBS consumers, residual secondary point-to-point microwave users, and is about to be shared by several NGSO FSS systems. As noted in several of the reconsideration petitions,¹⁴ the Commission has not explained in the Order how

¹² See Order at ¶ 168.

¹³ Northpoint Opposition at 7 (footnote omitted).

¹⁴ See DIRECTV Petition for Reconsideration at 11-14; EchoStar Petition for Reconsideration at 5-9; 4-7.

three-way spectrum sharing by mass-market consumer services at 12 GHz can possibly be justified. Therefore, if it is true, as DIRECTV and other petitioners contend, that the 12 GHz Band does not offer material advantages over the bands already allocated for point-to-multipoint video and data distribution in terms of overall bandwidth, encumbrance by existing services, or propagation difficulties,¹⁵ then the Commission is required to consider locating proposed MVDDS operations elsewhere.

In addition, although Northpoint repeats the Commission's vague reference to "economies of scale and scope" that purportedly require the use of the 12 GHz Band,¹⁶ DIRECTV has shown that the existence of any such economies is highly doubtful. The majority of equipment used by DBS operators is neither band-specific nor unique to the DBS service,¹⁷ and Northpoint's opposition does not address this point with any meaningful analysis or data that show otherwise.¹⁸

Finally, Northpoint and the other MVDDS proponents do not address petitioners' catalogue of other fundamental deficiencies in the Order that could affect profoundly any analysis of the sharing question, including an assessment of the aggregate impact of NGSO FSS and

¹⁵ See, e.g., DIRECTV Petition for Reconsideration at 17-21.

¹⁶ Northpoint Opposition at 8.

¹⁷ See DIRECTV Petition for Reconsideration at 21-22.

¹⁸ MDS America asserts that it has successfully deployed terrestrial systems capable of co-existing with DBS systems elsewhere in the world, and that this fact should bear favorably on the Commission's conclusion that spectrum sharing is feasible at 12 GHz. MDS America Opposition at 5-7. DIRECTV is still in the process of evaluating these claims, but the extent to which MDS America has actually co-existed with high-power BSS systems around the world is extremely unclear. Thus, it is difficult to assess at this juncture whether MDS America's experiences are in any way relevant to the issues raised in this proceeding. DIRECTV will supplement the record shortly with an evaluation of MDS America's operations.

proposed MVDDS services on DBS operations.¹⁹ As the MITRE Report observes, "other causes of unavailability" must be considered in the MVDDS/DBS sharing analysis.²⁰ The Commission cannot separately compartmentalize the exploration of NGSO FSS/DBS sharing questions and proposed MVDDS/DBS sharing questions. Once again, the Commission is proposing an unprecedented sharing scenario between *three* ubiquitously deployed services, and one of them – the DBS service – has millions of customers and more than a billion dollars in deployed system assets. The Order's deficient assessment of the feasibility and implications of sharing among all three services at 12 GHz cannot justify putting these DBS customers and systems at risk.

II. RECENT INDEPENDENT TESTING OF NORTHPOINT'S PROPOSED MVDDS SYSTEM PROVIDES NEW EVIDENCE THAT SHARING BETWEEN PROPOSED MVDDS AND DBS SERVICES IS NOT FEASIBLE, AND THAT RECONSIDERATION OF THE ORDER IS REQUIRED

Northpoint's opposition dismisses the positions of the DBS interests as resting upon "the false premise that DBS operations will suffer as a result of terrestrial broadcasts."²¹ Northpoint does not dispute that it has asked the Commission to take a truly unprecedented step in opening up the 12 GHz band to three ubiquitously deployed services, but spins this issue as "underscor[ing] the point that Northpoint's technology is truly innovative: Northpoint has found a technical solution that has eluded others in the past," and "[t]he Commission was correct to recognize Northpoint's achievement by authorizing terrestrial sharing of the 12 GHz band."²²

¹⁹ Other such deficiencies include the Commission's failure to consider multipath effects in assessing the impact of MVDDS system interference, as well as the effects of multiple transmitters in tightly packed deployments.

²⁰ MITRE Report at xx.

²¹ Northpoint Opposition Petition at 4.

²² *Id.*

Unfortunately for Northpoint, new evidence highlights further the inaccuracy of these statements. Although the Commission's Order doubted that further independent testing would produce "relevant new data,"²³ Congress disagreed, and required the Commission to retain an independent entity to assess the interference risks involved in introducing a mass-market terrestrial point-to-multipoint microwave service into the DBS downlink band. DIRECTV will offer next week more comprehensive comment on the MITRE Report. But the report is relevant here because it *completely validates* DBS operator estimates of the interference risk posed by the introduction of a proposed Northpoint MVDDS system at 12 GHz.

Specifically, the MITRE Report finds that "MVDDS sharing of the 12.2-12.7 GHz band currently reserved for DBS poses *a significant interference threat* to DBS operation in many realistic operational situations."²⁴ This threshold finding puts to rest once and for all Northpoint's claim that its "terrestrial system can share the 12 GHz Band with DBS operators without causing harmful interference."²⁵

For reconsideration purposes here, the MITRE Report confirms that the baseline for Commission consideration of the proposed MVDDS/BSS sharing question is an environment that features "significant interference" to the service of primary DBS subscribers. As a legal matter, it is undisputed that the Commission cannot create a secondary fixed service in the 12 GHz Band that causes harmful interference to DBS service. The Commission's rules prohibit it²⁶ and

²³ Order at ¶ 215.

²⁴ MITRE Report at xvi, 6-1 (emphasis added).

²⁵ Northpoint Opposition at 4.

²⁶ See Order at ¶ 6 n.21 (citing 47 C.F.R. § 2.106, footnote 844 and 47 C.F.R. § 101.147(p)).

Congress recently reiterated the point in unequivocal language.²⁷ Thus, the viability of the Commission's "sharing is possible" finding in the Order hinges *entirely* on the questions of whether mitigation of the "significant" Northpoint MVDDS system interference is possible and at what cost.²⁸

This fact in itself demands reconsideration. Before the question of sharing at 12 GHz can even be considered, proposed MVDDS systems should be obligated to come forward with a system design that can be proven not to cause "significant interference" to primary DBS operations in the first instance. To date this has not occurred.

Furthermore, it is untenable for the Commission to conclude that MVDDS/DBS co-existence is possible based upon a record that is devoid of any detailed explanation or analysis of the mitigation techniques on which this finding rests. The Commission has offered nothing more than speculative measures to be fleshed out in a pending proceeding as the sole basis for concluding that sharing between ubiquitously deployed DBS receivers and proposed ubiquitously deployed MVDDS systems is possible. And as the DBS operators have shown, and MITRE has confirmed, the types of mitigatory measures necessary to make sharing allegedly "feasible" are expensive, burdensome and impractical. Moreover, MITRE concludes that, even assuming that

²⁷ The Commission has described the proposed MVDDS service as satisfying the goal of the Rural Local Broadcast Signal Act ("RLBSA"), which was enacted as Title II of the Intellectual Property and Communications Omnibus Reform Act of 1999, Pub. L. 106-113 Stat. 1501. However, the RLBSA requires the FCC to "ensure that no facility licensed or authorized" under the statute "causes harmful interference to the primary users of that spectrum," in this case, the DBS service. *See* RLBSA, § 2002(b)(2).

²⁸ Again, the MITRE Report confirms the point, noting that "MVDDS/DBS bandsharing appears feasible *if and only if* suitable mitigation measures are applied." MITRE Report at xvii (emphasis added).

every mitigation technique proposed is adopted, DBS subscribers will still experience "residual interference."²⁹

The MITRE Report offers yet more evidence that the Order must be reconsidered.

DIRECTV urges the Commission to do so.

III. ISSUES REGARDING THE CO-EXISTENCE OF BSS AND NGSO FSS SERVICES

A. The ITU-BR Software Should be Used On Test Points Representing Worst-Case Long-Term and Worst-Case Short-Term Interference

As noted in DIRECTV's petition, the Order refers to testing that will be performed by the ITU-BR on "validation" epfd limits that will be used to ensure the appropriate protection of smaller BSS earth station antennas ranging from 30 cm to 120 cm in diameter.³⁰ This testing will utilize ITU-BR software (as described in ITU-R Recommendation S.1503) to verify that an NGSO FSS network meets the specified epfd limits, and the software will evaluate the interference epfd levels at geographic test points that are provided either by the notifying administration or generated by the BR staff. The Commission has proposed that the NGSO FSS operator demonstrate compliance to the epfd limits at "three worst case test points within the United States."³¹ DIRECTV has asked the Commission to reconsider this proposal, noting that three is an insufficient number of test points, and that it is unclear whether these test points exhibit worst case short-term or long-term interference, since these conditions do not typically occur at the same geographic location. Thus, to ensure that high long-term interference levels are taken

²⁹ Even adopting all of the mitigation measures discussed by MITRE will not eliminate "residual MVDDS-to-DBS interference." *See id.* at xvii.

³⁰ *Id.* at ¶ 179; *see id.* ¶ 171 n. 365.

³¹ Order at ¶ 98.

into account, DIRECTV has proposed that each DBS operator be allowed to define for the Commission at least 30 test points across its coverage area.

SkyBridge takes issue with DIRECTV's proposal. SkyBridge asks the Commission instead to "employ the agreed upon procedures for determining the test point to be used in conjunction with the validation tool," arguing that "[t]he use of additional test points are not needed to determine compliance with the limits."³² However, SkyBridge itself also acknowledges that the determination of an epfd curve that represents the worst case epfd curve is "somewhat subjective."³³

It is in fact difficult to locate any one particular test point, or even any small set of test points with their corresponding calculated epfd curves, which represents the bounding case – that is, a set of test points and corresponding epfd curves that represents the worst case epfd levels over the entire range of percentages of time, and not just for the "100% of time not to be exceeded" case. This is the reason that DIRECTV has requested that the set of test points used in the NGSO-FSS domestic licensing process be sufficiently large so that reasonable confidence in epfd limit compliance can be assured. DIRECTV notes that when administrations file for BSS systems with the ITU, they define twenty test points across the BSS satellite service area. These twenty test points are used by the BR in determining whether a BSS system is affected by another BSS system by determining if defined limits, contained in Annex 1 of Appendix S30, are exceeded at any of the twenty test points. In other words BSS systems are protected at twenty test points

³² SkyBridge Opposition at i-ii.

³³ *Id.* at 4.

from other co-primary BSS systems. Therefore protection of BSS systems at more than three test points is an accepted practice by the ITU.

The functional software specification for the determination of conformity of an NGSO-FSS system to the limits is found in ITU-R Recommendation S.1503. For the very common case concerning NGSO-FSS systems interfering with victim receive antennas that are larger than those commonly used in the BSS, the most critical interference cases almost always concern the maximum value of interference that will ever be seen. Sections 3.5.1 and 3.5.2 of Part D of Annex 1 of that Recommendation describe in detail two different approaches to calculate the $epfd(\text{down})$ values at defined test points. In step 3 of each of these approaches, the analyst has the option of using either an externally supplied test point or the use of an internally calculated test point. The internally calculated test points (or points of "Maximum $epfd(\text{down})$ GSO locations") are determined by a procedure defined in Part C' of Annex 1, and this section specifically addresses the calculation of points of maximum interference that will be seen for all time.

However, as has frequently been pointed out, BSS operators are much more focused on the behavior of the $epfd$ curves at percentages of time less than the one represented by the absolute maximum $epfd$ point. This is a critical area for the protection of small victim receive antennas. The locations of test points that represent this situation are much more difficult to predict, and a procedure to do this would be much more involved than the procedure outlined in Part C' of Annex 1 of the Recommendation. To the best of DIRECTV's knowledge, such a procedure has not yet been developed.

To provide a partial remedy to this situation, the United States presented a paper to the October 1999 meeting of ITU-R Joint Working Party 10-11S that requested that administrations be allowed to submit additional test points for consideration.³⁴ The result of that input document was the addition of Section 4.4.1 to Part B of Annex 1 of the Recommendation that allows for the definition of additional test points by the notifying administration.

Thus, contrary to the claims of SkyBridge, additional test points are clearly needed to ensure the protection of the BSS, and the point has been recognized in the ITU process. To only use the test points calculated internally by the validation software is insufficient. Additional test points of sufficient number must be run to provide reasonable confidence that the limits are being met.

Finally, SkyBridge claims that the computer run time for each test point may be very long.³⁵ DIRECTV cannot comment on the run times required per test point. DIRECTV's intent certainly is not to specify such a large number of test points that the validation process becomes excessively mired in calculations. That said, the result must be that a sufficient number of test points is selected and run so that there is reasonable confidence that the epfd limits are being met in their entirety. A range of 20-30 test points should meet this objective.

The stakes are too high for the Commission to err in its introduction of NGSO FSS systems into the 12 GHz Band. The burden falls squarely on SkyBridge and other NGSO operators to show that their systems will not cause harmful interference with BSS service.³⁶

³⁴ See Document ITU-R 10-11S/227 at 2, § 4.

³⁵ SkyBridge Opposition at 5 & n.10.

³⁶ For the same reason, it is not appropriate for SkyBridge to shrug off its obligation by stating that "[if a GSO operator believes that the results for additional data points would

B. Ninety Days Is Not Long Enough to Ensure NGSO FSS System Compliance With Operational/Additional Operational EPFD Limits

The Order requires NGSO FSS system licensees to demonstrate compliance with operational and additional operational FSS and BSS epfd limits ninety days prior to the NGSO FSS system's initiation of service.³⁷ In its petition, DIRECTV agreed that it is critical for NGSO FSS systems to demonstrate that they can meet the operational/additional operational epfd limits before they initiate service, but asked for additional lead time for such demonstrations to occur, since the 90-day timeframe implemented in the new rules is simply too short to accomplish this purpose.

SkyBridge itself acknowledges that a 90-day compliance review period "is far too abbreviated."³⁸ Accordingly, DIRECTV reiterates its call for an earlier demonstration by the NGSO FSS licensee of compliance with operational epfd limits than is called for in the Order. This demonstration could be conducted by software simulation, as outlined in paragraph 98 of the Order. In order to provide enough lead time, however, any demonstration by software simulation should occur at least 180 days prior to the initiation of service.

Alternatively, to the extent that SkyBridge is concerned about "overly pessimistic results" attending a software simulation,³⁹ the demonstration could be conducted by field testing, first with a small fraction of its operational constellation, and later with a nearly complete constellation, as

be useful, it will be able to perform such simulations itself." *Id.* at 5. This position places an undue burden on the DBS operator, when it is incumbent on the proposed NGSO-FSS system operator to show compliance to the limits – not the other way around.

³⁷ See Order at ¶¶ 96-98 (FSS), ¶ 195 (BSS). See also new Order, Appendix A, new Rule 25.146(b).

³⁸ SkyBridge Opposition at 14.

³⁹ SkyBridge Opposition at 8.

DIRECTV has proposed. Such field testing would have to be combined with sufficiently rigorous analysis to provide confidence that the fully deployed system will meet the operational limits. The demonstration by field testing and analysis would obviously occur as the NGSO FSS constellation is deployed.

C. The Commission Must Require a Demonstration That NGSO FSS Systems Can Meet Aggregate EPFD Limits

Finally, DIRECTV again urges that compliance with aggregate BSS epfd limits be made an express condition on the licenses of NGSO FSS systems and any Commission authorization of foreign NGSO FSS systems. SkyBridge objects to this notion as a form of "communal responsibility" that could place NGSO licenses at risk due to circumstances outside of their control.⁴⁰ Instead, SkyBridge contends that the Commission's NGSO/NGSO sharing rules, which remain to be developed,⁴¹ must "take into consideration the aggregate limits, and that any system that violates those rules will immediately be held accountable."⁴²

DIRECTV trusts that NGSO/NGSO sharing rules also will reflect the importance of NGSO FSS systems meeting aggregate epfd limits for FSS and BSS systems,⁴³ as SkyBridge suggests. But DIRECTV believes that the requirement is important enough to the threshold viability of NGSO FSS/BSS sharing that individual NGSO FSS systems should be made fully

⁴⁰ *Id.* at 12.

⁴¹ *See* In the Matter of Establishment of Policies and Service Rules for the Non-Geostationary Satellite Orbit, Fixed Satellite Service in the Ku-Band, IB Docket No. 01-96, Notice of Proposed Rulemaking (rel. May 3, 2001).

⁴² SkyBridge Opposition at 12.

⁴³ Order at ¶¶ 106-108, 198.

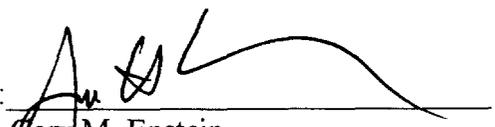
cognizant of the need to comply with aggregate epfd limits in addition to single entry epfd limits. A license condition is a perfectly appropriate method of ensuring this awareness and responsibility on the part of each NGSO FSS licensee. Through such a condition, all NGSO FSS licensees will be expressly on notice that they may be required to modify their operations to reduce aggregate interference as the Commission may require.

IV. CONCLUSION

For the reasons set forth above, DIRECTV requests that the Order be reconsidered and the Commission's rules revised in accordance with DIRECTV's petition.

Respectfully submitted,

DIRECTV, INC.

By: 

Gary M. Epstein

James H. Barker

LATHAM & WATKINS

1001 Pennsylvania Avenue, N.W.,

Suite 1300

Washington, D.C. 20004-2505

(202) 637-2200

Dated: May 9, 2001

CERTIFICATE OF SERVICE

I hereby certify that this 9th day of May 2001, a true and correct copy of the foregoing was served via hand delivery upon the following:

Peter A. Tenhula
Office of Chairman Michael Powell
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20054

Julius Knapp
Office of Engineering & Technology
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20054

Mark Schneider
Office of Commissioner Susan Ness
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20054

Michael J. Marcus
Office of Engineering & Technology
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20054

Adam Krinsky
Office of Commissioner Gloria Tristani
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20054

Ira Kelz
Office of Engineering & Technology
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20054

Bryan Tramont
Office of Commissioner
Harold W. Furchtgott-Roth
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20054

James Burtle
Office of Engineering & Technology
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20054

Bruce Franca
Office of Engineering & Technology
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20054

Thomas J. Sugrue
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20054

Rebecca Dorch
Office of Engineering & Technology
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20054

Kathleen O'Brien Hamm
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20054

Mark Rubin
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20054

D'wana Terry
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20054

Donald Abelson
International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20054

Thomas Tycz
International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20054

Christopher Murphy
International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20054

Jennifer Gilson
International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20054

Antoinette Cook Bush
Executive Vice President
Northpoint Technology, Ltd. and
BroadwaveUSA
400 North Capitol Street, Suite 368
Washington, D.C. 20001

Nathaniel J. Hardy
Irwin, Campbell & Tannenwald, P.C.
1730 Rhode Island Avenue, N.W.
Suite 200
Washington, D.C. 20036

Michael K. Kellogg
Kellogg, Huber, Hansen, Todd & Evans,
P.L.L.C.
1615 M Street, N.W.
Suite 400
Washington, D.C. 20036

Counsel for Northpoint Technology, Ltd.

Pantelis Michalopoulos
Steptoe & Johnson, LLP
1330 Connecticut Avenue, N.W.
Washington, D.C. 20036

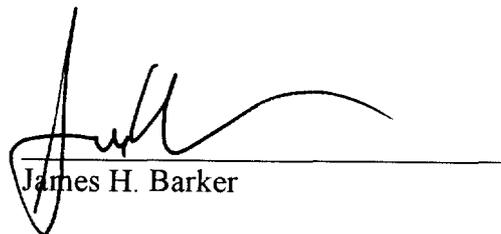
Counsel for EchoStar Satellite Corporation

Bruce D. Jacobs
David C. Oxenford
Shaw Pittman
2300 N Street, N.W.
Washington, D.C. 20037

Counsel for Pegasus Broadband Corp.

Margaret L. Tobey
Morrison & Foerster
2000 Pennsylvania Avenue, N.W.
Suite 5500
Washington, D.C. 20006

*Counsel for The Satellite Broadcasting
& Communications Association*



James H. Barker