

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

In the Matter of)	
)	
Annual Assessment of the Status of)	CS Docket No. 01-129
Competition in the Market for the)	
Delivery of Video Programming)	
)	
)	

**REPLY COMMENTS OF NORTHPOINT TECHNOLOGY, LTD.
AND BROADWAVE USA, INC.**

It is remarkable that the Direct Broadcast Satellite (“DBS”) industry has chosen to use the Commission’s Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming as a forum to attack the groundbreaking effort of Northpoint Technology, Ltd., and Broadwave USA, Inc., (collectively, “Northpoint”) to create a new national competitor in the Multichannel Video Programming Delivery (“MVPD”) marketplace. As prior Annual Assessments have shown, the MVPD marketplace is currently bereft of competitive alternatives. DBS, in particular, has utterly failed to restrain prices. Further, DBS has announced plans to carry local television signals in only 45 out of 210 markets.¹ The markets targeted for service are in predominantly urban areas, leaving most Americans living in rural areas unserved.

Northpoint has developed, patented, and demonstrated in independent tests a revolutionary technology that enables terrestrial broadcasters to share spectrum ubiquitously with the two existing DBS operators and with up to eight planned Non-

¹ See, .e.g., Report, *Report to Congressional Committees Pursuant to the Rural Local Broadcast Signal Act*, FCC 00-454, ¶ 32 (rel. Jan. 2, 2001) (“DBS carriers currently serve only the top 40 markets and have not announced plans to extend beyond the top 45 markets, which would leave one-third of the 100.8 million television households (roughly 33.6 million) without access to local-into-local service on satellite.”).

Geostationary Satellite Orbit Fixed Satellite Services (“NGSO FSS”). As noted in the *2000 Report*,² the Commission has decided to authorize new terrestrial services in the 12.2-12.7 GHz band based on Northpoint’s successful demonstrations of its technology.³ Northpoint intends to be a price competitor to both cable and DBS and has committed to deploying its breakthrough technology nationwide within just two years of licensing, thus rapidly bringing real competition to the MVPD market. Northpoint’s technology offers a cost-effective means of providing video programming (including local TV broadcasts) and broadband Internet access to rural areas at affordable prices.

In a desperate effort to delay deployment of Northpoint’s technology, the DBS operators and their allies have attacked Northpoint in their comments in this docket, repeating the same tired arguments that the Commission has considered and rejected in ET Docket 98-206. Northpoint submits the following Reply Comments to set the record straight and to urge the Commission to grant Northpoint’s pending license applications quickly so that the public can benefit, sooner rather than later, from the increased competition that this new technology will bring to the MVPD market, as well as to the market for broadband Internet access.

I. The Commission Correctly Determined, and the MITRE Report Confirmed, That Ubiquitous Terrestrial Sharing of the 12.2-12.7 GHz Band Is Feasible

Northpoint has spent more than seven years before the Commission demonstrating that its technology is capable of harvesting extra bandwidth out of spectrum already allocated to satellite use. Northpoint’s technology allows terrestrial and

² Seventh Annual Report, *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, CS Docket No. 00-132, FCC 01-1 (rel. Jan. 8, 2001) (“*2000 Report*”).

³ *Id.* ¶ 80; *see also* First Report and Order and Further Notice of Proposed Rule Making, *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*, ¶ 327 16 FCC Rcd 4096, ¶ 327 (2000) (“*First Report and Order*”).

satellite users to operate on the *very same frequencies* at the *very same time*.⁴ In the *First Report and Order* in ET Docket 98-206, the Commission decided, after careful review of several engineering studies from both the satellite industry and Northpoint, that “*it is feasible* to avoid or correct harmful interference situations between MVDDS and DBS.”⁵

Shortly after the *First Report and Order* was released, Congress passed a law designed to ensure that no entity would be considered for a license to provide terrestrial services in the 12.2-12.7 GHz band without first demonstrating that it possessed technology capable of operating in the band without causing harmful interference to DBS. Specifically, the statute required the Commission to

Provide for an independent technical demonstration of any terrestrial service technology proposed by any entity that has filed an application to provide terrestrial service in the [12.2-12.7 GHz band] to determine whether the terrestrial service technology proposed to be provided by that entity will cause harmful interference to any direct broadcast satellite service.⁶

The Commission chose The MITRE Corporation (“MITRE”) to perform the required independent technical demonstration. Significantly, *only* Northpoint submitted technology and equipment to MITRE for the required demonstration. Echoing the Commission’s order authorizing terrestrial service based on Northpoint’s technology, MITRE concluded that, with implementation of the policy recommendations outlined in its report, “spectrum sharing between DBS and MVDDS services in the 12.2–12.7 GHz

⁴ Northpoint has long sought an authorization to deploy its terrestrial technology but never sought the formal creation of a new service. Nevertheless, the Commission has proposed to create a new terrestrial service under the existing allocation for terrestrial services in the 12.2-12.7 GHz band. The Commission has dubbed its new service Multichannel Video Distribution and Data Service, or “MVDDS.” See *First Report and Order* ¶ 1.

⁵ *First Report and Order* ¶ 167 (emphasis added).

⁶ Launching Our Communities’ Access to Local Television Act of 2000, Pub. L. No. 106-553, App. B, Tit. X, § 1012(a), 114 Stat. 2762, 2762A-128, 2762A-141 (codified at 47 U.S.C. § 1110(a)).

band *is feasible*.”⁷ A more independent endorsement of the Commission’s conclusion could hardly be found.

In the apparent hope of getting the Commission to reconsider its decision to allow terrestrial sharing of the 12.2-12.7 GHz band, however, the DBS industry repeats one sentence in the MITRE Report, taken out of context – namely, MITRE’s observation that terrestrial sharing of that band “poses a significant interference threat to DBS operation.”⁸ Yet MITRE did no more than state the obvious in that sentence because *any time* two or more services operate simultaneously on a co-frequency basis, there is a *threat* of harmful interference. As one commenter on the MITRE Report correctly noted, “[a]ll the parties in the MVDDS Rulemaking understood that if the Commission were to create this new service, rules would have to be formulated so as not to substantially interfere with existing licensees in the Ku-band.”⁹ The Commission properly concluded that ubiquitous sharing is feasible using Northpoint’s mitigation techniques, and MITRE agreed. No amount of denial or sophistry from the DBS industry can change that. The suggestion of the DBS commenters that Northpoint’s service will harmfully “degrade” DBS service is therefore completely misplaced.¹⁰

Northpoint readily acknowledges DBS’s primary status in the 12.2-12.7 GHz band and readily accepts its obligation (once licensed) to avoid or mitigate harmful interference to DBS operations. The SBCA asserts, without citing any authority, that any

⁷ See Comments of the Satellite Broadcasting and Communications Association at 13 (FCC Filed Aug. 3, 2001) (“SBCA NOI Comments”); Comments of DIRECTV, Inc. at 5-6 (FCC Filed Aug. 3, 2001) (“DIRECTV NOI Comments”); Comments of EchoStar Satellite Corp. at 14-15 (“EchoStar NOI Comments”) (all quoting The MITRE Corp., MITRE Technical Report, *Analysis of Potential MVDDS Interference to DBS in the 12.2-12.7 GHz Band*, at xxi (FCC sponsored report, Project No. 1201FCC2-01, Apr. 2001) (“MITRE Report”).

⁸ MITRE Report at xvi.

⁹ Comments of Satellite Receivers, Ltd., in Response to the MITRE Corp. Technical Report at 2 (FCC filed May 15, 2001).

mitigation measures that would be implemented at a DBS consumer's premises would be unlawful.¹¹ Northpoint has refuted this strange argument at length elsewhere¹² and will not repeat all the details here. It is worth recalling, however, that a key feature of Northpoint's technology is to locate transmitters so as to avoid placing DBS subscribers into zones of harmful interference. When Northpoint applied for an experimental license to test its technology in Washington, D.C., DIRECTV stated, "[w]ith tens of thousands of subscribers in the vicinity of the proposed test sites, *interference is unavoidable* – it is only a question of how much."¹³ In its Washington tests, however, Northpoint was able to place a signal over a significant portion of the city without conducting any on-site mitigation.¹⁴ Moreover, as the Commission noted in its *First Report and Order*, there has never been a report of harmful interference to any DBS customer during the Washington test, or any of Northpoint's prior tests, or the DBS industry's own test of Northpoint's technology.¹⁵ Therefore, to the extent the DBS industry wishes to argue against terrestrial service on the ground that it will cause inconvenience to a significant percentage of DBS subscribers, it is mistaken and contrary to the record in Docket 98-206.

¹⁰ SBCA NOI Comments at 14; DIRECTV NOI Comments at 6; *see also* EchoStar NOI Comments at 15.

¹¹ SBCA NOI Comments at 14.

¹² *See, e.g.*, Reply Comments of Northpoint Technology, Ltd., and Broadwave USA, Inc., on MITRE Corporation Report at 12-22, ET Docket 98-206 (FCC filed May 23, 2001).

¹³ Ex parte letter from James H. Barker to Magalie Roman Salas, ET Docket 98-206 et al. (FCC filed June 23, 1999), attachment at 1 (emphasis in original).

¹⁴ Ex parte letter from Antoinette Cook Bush, Northpoint, to Magalie Roman Salas, ET Docket 98-206 et al. (FCC filed Feb. 17, 2000), Attachment 4, Bob Combs, Broadwave USA and Darryl DeLawder, DeLawder Communications, *Methodology for Predicting Terrestrial Interaction with DBS in the 12.2-12.7 GHz Band*, at 15 (Jan. 18, 2000).

¹⁵ *First Report and Order* ¶¶ 214-215.

Moreover, on-site mitigation can occur only with the DBS customer's consent.¹⁶ Accordingly, in the unlikely event that a DBS customer suffers harmful interference due to Northpoint's transmissions, if that customer declines to allow on-site mitigation, then Northpoint will move its transmitter or take other off-site actions to mitigate the harmful interference. On-site mitigation will not be too burdensome, since the subscriber is always at liberty to refuse it. And, contrary to the SBCA's suggestion,¹⁷ on-site mitigation does not affect DBS's primary status, since if mitigation is not possible, the terrestrial transmitter will be relocated.

The choice of whether to allow the mitigation belongs to the subscriber, however, not to the DBS operators. The Commission should reject the DBS operators' attempt to prevent their subscribers from making that choice for themselves by ruling out on-site mitigation altogether – an attempt clearly designed only to torpedo Northpoint before it can emerge as an effective competitor.

II. Northpoint Can Avoid the Pitfalls That Have Foiled Previous Attempts to Increase Competition in the MVPD Market

Northpoint's proposed terrestrial service aims to avoid many of the problems that have hindered the effectiveness of previous entrants into the MVPD market. For example, DBS for many years had difficulty making inroads against cable television due to its inability to provide local television channels, a situation remedied in part by the

¹⁶ The *First Report and Order* lists possible mitigation techniques, including “5) more accurately pointing DBS receive antennas toward the intended satellite at their expense and *with the permission of the DBS subscriber*; 6) relocating DBS receive antennas at their expense and *with the permission of the DBS subscriber*; 7) replacing smaller DBS receive antennas with larger DBS receive antennas at their expense and *with the permission of the DBS subscriber*; 8) shielding DBS receive antennas from their transmitters at their expense and *with the permission of the DBS subscriber*; 9) employing planar DBS antennas at their expense and *with the permission of the DBS subscriber*.” *First Report and Order* ¶ 216 (emphasis added and footnote omitted).

¹⁷ SBCA NOI Comments at 14.

Satellite Home Viewer Improvement Act (“SHVIA”).¹⁸ DBS systems lack the capacity needed to carry local channels in every market, however. And DBS will be able to serve even fewer markets once the must-carry provisions of the SHVIA come into effect.¹⁹ Northpoint’s low-cost repeater infrastructure is designed to carry local television signals in *every* local broadcast market, thus making Northpoint a more effective competitor to cable, especially in the more than 150 markets in which DBS will carry no local signals at all.

By applying for licenses in every domestic local broadcast market, and by planning a short build-out period (*nationwide* build-out within just *two years* of licensing), Northpoint will be better positioned to reap scale and scope economies that eluded previous terrestrial wireless entrants into the MVPD market. Northpoint believes that the ability of MMDS and LMDS operators to be effective competitors to cable was hindered in part by the Commission’s decision to license them in a geographically piecemeal fashion. The lack of a national network left these would-be competitors in a weak position when bargaining for program access and left them with too small a customer base over which to spread the fixed costs of their operations.

Another key advantage of Northpoint’s technology is its ability to use the 12.2-12.7 GHz band. The DBS operators have asked the Commission to relegate Northpoint to some other, less desirable spectrum band, such as the bands allocated to MMDS or LMDS.²⁰ As explained by various commenters in ET Docket 98-206, however, the 12.2-12.7 GHz band has particularly favorable transmission characteristics that make it better suited for spectrum sharing than the lower MMDS wavelengths and more reliable in

¹⁸ See, e.g., 2000 Report ¶¶ 68-71.

¹⁹ See, e.g., DIRECTV NOI Comments at 7-8.

inclement weather than the higher LMDS wavelengths.²¹ Moreover, the 12.2-12.7 GHz band is one of the few bands in which adequate bandwidth is available to provide a commercially viable MVPD offering. Perhaps most important, scale economies for both transmission and receiving equipment are available in the 12.2-12.7 GHz band. By using equipment that is already widely available at commercially attractive price points, Northpoint can provide service in the 12.2-12.7 GHz band without the crippling capital costs that have hobbled previous “wireless cable” ventures.

III. The Commission Should Grant Northpoint’s Pending License Applications Quickly, Without Competitive Bidding

The National Rural Telecommunications Cooperative (“NRTC”) argues that the Commission should distribute licenses to provide terrestrial service in the 12.2-12.7 GHz band via auction.²² As discussed at much greater length in its comments in ET Docket 98-206,²³ Northpoint recognizes that auctions are often an excellent way to distribute spectrum but believes that auctions would be wholly inappropriate in the current circumstances. As a policy matter, the NRTC’s call for auctions ignores Northpoint’s unique role in creating new bandwidth in spectrum that the Commission had already allocated and assigned. The long-run effect of subjecting Northpoint to an auction would be to crush the incentives for entrepreneurs and inventors to develop innovative technologies to create new bandwidth in already licensed spectrum.

More significantly, there are several important legal impediments to an auction. For example, only Northpoint’s technology has passed the statutorily mandated

²⁰ SBCA NOI Comments at 14; EchoStar NOI Comments at 14.

²¹ Comments of AT&T Corp. at 11, ET Docket 98-206 (FCC filed Mar. 12, 2001).

²² Comments of the National Rural Telecommunications Cooperative at 18, CS Docket No. 01-129 (FCC filed Aug 3, 2001) (“NRTC NOI Comments”).

independent demonstration conducted by MITRE. Accordingly, Northpoint is the only applicant qualified for a terrestrial license. In the absence of mutually exclusive applications, there is no rationale for an auction. In addition, the ORBIT Act's ban on auctioning spectrum used for international or global satellite service applies to the 12.2-12.7 GHz band.²⁴

Finally, an auction would unacceptably delay the entry of an important new competitor to shake up the cozy DBS/cable duopoly in the MVPD market. Former FCC Chief Economist Thomas W. Hazlett has estimated that each year's delay in the issuance of terrestrial licenses in the 12.2-12.7 GHz band results in lost consumer surplus of some two billion dollars.²⁵ The delay needed to design and carry out an auction will result in consumer losses that will far outweigh any revenues or efficiency gains that might be associated with auctions.

CONCLUSION

In view of Northpoint's tremendous potential to bring much needed competition of the MVPD and broadband Internet access markets; in view of MITRE's confirmation that Northpoint's technology can share the 12.2-12.7 GHz band without causing harmful interference to DBS operations; and in view of the failure of any other entity to provide terrestrial service technology for testing by MITRE, the Commission should grant the pending license applications of Northpoint's Broadwave USA affiliates to provide

²³ Comments of Northpoint Technology, Ltd., and Broadwave USA, Inc., at 5-30, ET Docket 98-206 (FCC Filed Mar. 12, 2001) ("Northpoint FNPRM Comments."); Reply Comments of Northpoint Technology, Ltd., and Broadwave USA, Inc., at 3-10, ET Docket 98-206 (FCC Filed Apr. 5, 2001).

²⁴ See Open-Market Reorganization for the Betterment of International Telecommunications Act, Pub. L. No. 106-180, § 3, 114 Stat. 48, 57 (2000) ("ORBIT Act") (codified at 47 U.S.C. § 765f); see also Northpoint FNPRM Comments at 14-16.

²⁵ See Declaration of Thomas W. Hazlett ¶¶ 4,21, included as App. 1 to Northpoint FNPRM Comments.

terrestrial, point-to-multipoint video services in the 12.2-12.7 GHz band without further ado.

Respectfully submitted,

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