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October 4, 2000

By Courier
Ms. Magalie R. Salas
Office of the Secretary
Federal Communications Commission
445 12th Street, S.W.
Counter TW-A325
Washington, D.C. 20554

ORIGINAL

Re: Ex Parte Presentation of Pegasus Broadband Corporation
ET Docket No. 98-206, RM-9147, RM-9245,
DA 99-494, DA 00-1841, and DA 00-2134

Dear Ms. Salas:

Pursuant to the Commission's *ex parte* rules, this letter is written to notify you that on October 3, 2000, Cheryl Crate and John Hane, representatives of Pegasus Broadband Corporation, and Bruce Jacobs, its counsel, met with Bryan Tramont, legal advisor to Commissioner Furchtgott-Roth.

In the meeting, Pegasus reiterated the position it has taken in written submissions to the Commission, that it has a legitimate right to full consideration of its application to provide terrestrial services in the Ku band. Pegasus also emphasized that the Commission's *ex parte* rules for restricted proceedings apply with respect to contacts with the Commission regarding among other things the merits of the mutually exclusive terrestrial applications. Following the meeting, the attached excerpts from the Commission's Notice of Proposed Rulemaking in the above-captioned proceedings were sent to Mr. Tramont.

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An original and 12 copies of this letter and the attachment are submitted for inclusion in the public record in the above-captioned proceedings. Please direct all inquiries regarding this submission to the undersigned.

Very truly yours,

Tony Lin

Attachment
cc: Bryan Tramont

8. On March 6, 1998, Northpoint filed a Petition for Rulemaking with the Commission aimed at providing terrestrial retransmission of local television signals and one-way data services to

16 The pfd limits to protect terrestrial services from satellite operations are different from the epfd and apfd limits used to protect GSO operations from NGSO operations in that a pfd limit applies to each NGSO FSS satellite independently, whereas an epfd or apfd limit applies aggregately from all the satellites or earth stations in the NGSO FSS system, respectively.

17 The pfd limits to protect Ku-band terrestrial services are not provisional, except for the NGSO FSS pfd limits in the 17.7-17.8 GHz band. Thus, NGSO FSS systems authorized prior to WRC-2000 must conform to the pfd levels adopted by WRC-97. If the pfd levels are modified at WRC-2000, however, NGSO FSS systems authorized after the new limits are effective would conform to the new limits.

18 Following WRC-97, ITU-R JTG 4-9-11 was created to analyze NGSO FSS sharing with GSO FSS, fixed service and GSO BSS services in the Ku and Ka bands. The numbers "4", "9," and "11" refer to ITU-R study group designations: 4 - fixed satellite; 9 - fixed service; and 11 - broadcasting (television).

19 *See, e.g., Preliminary Draft New Recommendation on the Maximum Allowable Values of PFD Produced at the Earth's Surface by NGSO satellites in the FSS operating in the 10.7-12.75 Ghz band*, Document 4-9S/TEMP/73, October 2, 1998; *Preliminary Draft New Recommendation on Protection of FSS networks using slightly-inclined GSOs from all other FSS systems*, Document 4A/TEMP/72, October 9, 1998; *Preliminary Draft New Recommendation on the Protection of the Broadcasting-Satellite Service in the 12 GHz band and Associated Feeder links in the 17 GHz Band from Interference Caused by NGSO FSS Systems*, Document 10-11S/TEMP/41, October 12, 1998.

DBS receivers in the 12.2-12.7 GHz band on a secondary basis to BSS operations.[20] Northpoint states that its proposal would allow DBS subscribers to receive local television programming and one-way data services with minimal additional equipment and thus would permit the DBS service to compete more fully with cable television services. Because Northpoint is requesting that its terrestrial services be permitted to operate in some of the same spectrum requested by SkyBridge, we are addressing both petitions in this proceeding.

20 Northpoint Petition for Rulemaking, RM-9245, filed March 6, 1998. On March 23, 1998, the Commission issued a Public Notice inviting comment on the Northpoint petition. *Public Notice*, Report No. 2265, March 23, 1998.

F. Northpoint Petition for Rulemaking

91. Northpoint has filed a Petition for Rulemaking to permit secondary terrestrial use of the 12.2-12.7 GHz band[157] by DBS licensees and their affiliates to allow retransmission of local

[157] While this band is already allocated to the fixed service, it is only designated for use by fixed point-to-point microwave systems. After September 9, 1983, these point-to-point systems had to operate on a non-interference basis with respect to DBS systems. *See* 47 C.F.R. ▯ 101.47(p). Therefore, Northpoint proposes that its terrestrial operations

television programming and provision of one-way broadband data to DBS receivers.[158] Northpoint would use northward pointing dishes at a DBS subscriber's location to receive signals transmitted from terrestrial towers with directional antennas pointing southward. Northpoint argues that because DBS earth stations are pointed southward to receive signals from GSO BSS satellites located over the equator, and Northpoint receive antennas would be pointed northward to receive signals transmitted from southward pointing Northpoint transmitting antennas, spectrum sharing with DBS would be possible. Northpoint acknowledges that there are areas close to the Northpoint transmitter where the Northpoint signal would be strong enough to interfere with DBS receivers,[159] but it contends that the impact can be minimized. Specifically, Northpoint contends that careful siting of its transmitters, increased tower height, attenuation in the vertical plane, and other techniques could be used to minimize the size of exclusion zones and lessen their effect on DBS subscribers.[160] While the DBS comments agree that the provision of local programming to DBS subscribers is beneficial, their comments oppose the Northpoint request arguing that the proposal would unacceptably interfere with DBS services.[161]

92. *Northpoint sharing with DBS.* Northpoint argues that providing local programming to supplement DBS will make DBS a true competitor to cable. However, the DBS commenters argue that they are already employing various solutions to bring local programming to their subscribers that would accomplish the same objective without causing any disruption to their service.[162] For example, they are engaged in improving over-the-air broadcast reception through the use of better terrestrial antennas and they are deploying additional satellite capacity to provide local programming. We seek comment on whether a Northpoint type service is desirable to satisfy DBS subscribers' local programming needs.

93. Echostar Communications Corporation ("Echostar") questions why Northpoint□s technology requires the use of the 12.2-12.7 GHz band instead of bands the Commission has already set aside for ubiquitous or high density terrestrial services, including the Local Multipoint

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would be secondary only to DBS operations.

158 *See* Northpoint Petition at 1.

159 Northpoint refers to the area where DBS receivers could be adversely affected as a mitigation zone. However, the extent of interference to DBS receivers has yet to be quantified. While the term mitigation' suggests that there might be some technique, such as manmade or terrestrial barrier fencing or other techniques that can lessen or mitigate the interference from Northpoint transmitters into DBS receivers, the absence of a requirement, or the feasibility for Northpoint type systems to use mitigation techniques might affectively turn these mitigation zones into exclusion zones where DBS service would not be available.

160 *See* Northpoint's Reply at 6 and the attached Technical Annex at 10.

161 *See, e.g.,* DIRECTV Opposition at 1, PRIMESTAR, Inc. ("PRIMESTAR") Opposition at 1, EchoStar Communications Corporation Opposition at 1, Tempo Satellite, Inc. ("Tempo") Comments at 1 and USSB Comments at 3.

162 *See* PRIMESTAR Comments on Northpoint's Petition at 7.

Distribution Service ("LMDS") in the Ka-band and spectrum in the 38 GHz band.[163] Northpoint argues that operating in the 12.2-12.7 GHz band would allow its service to be provided by making minimal changes to existing DBS equipment, thus making its provision less expensive. Specifically, Northpoint argues that a subscriber would use its existing DBS receiver with the addition of minimal equipment (*e.g.*, northward antenna, cabling, switch). We request comment on whether existing equipment could be used, and if this would make Northpoint's service significantly less expensive than using other bands.

94. The DBS licensees have expressed doubt as to whether the Northpoint technology and DBS could share spectrum without creating harmful interference to DBS operations. DBS commenters state that Northpoint's experimental tests[164] and filings are inadequate to demonstrate that Northpoint can successfully share spectrum with DBS operations. Specifically, commenters indicate that Northpoint has not submitted sufficient analyses on reliable service areas, interference and the viability of mitigation zones. They question the reasonableness of Northpoint's service area if it is transmitting at a power low enough to protect GSO DBS reception. While Northpoint states it can provide a reliable service area of 10 miles,[165] Tempo disagrees.[166] Commenters also indicate that the feasibility of the use of power control to protect DBS during rain fade conditions is not adequately addressed, nor does Northpoint provide a description of how they will perform this task.[167] Moreover, further analysis is needed on the necessary carrier-to-interference ("C/I") ratio[168] to protect DBS from Northpoint transmissions and whether Northpoint's proposed system could meet these limits. DIRECTV states that any increase in the operational noise floor, such as that caused by Northpoint operations, would decrease DBS link availability and thus reduce the quality of DBS service and hinder future DBS innovation.[169]

95. While we recognize the potential benefits of the Northpoint proposal, the comments

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[163] *See* EchoStar Comments on Northpoint's Petition at 2.

[164] Northpoint has performed initial tests under an experimental license to determine the interference potential for the Northpoint system to DBS operations. Extensive questions were raised regarding the comprehensiveness and validity of Northpoint's first round of tests. Further, Northpoint is currently testing its proposed system under a second experimental license. Diversified Communication Engineering's application for modification of experimental license, which added Austin, TX, was granted on 7/20/98. The call sign is WA2XMY and the file number is 6001-EX-MR-1998.

[165] *See* Northpoint Petition at 19.

[166] *See* SkyBridge Comments at I and 6; Tempo Comments on Northpoint's Petition at 4-5.

[167] *See* DIRECTV Comments on Northpoint's Petition at 6; USSB Comments on Northpoint's Petition at 5-6; PRIMESTAR Comments on Northpoint's Petition at 3.

[168] The carrier-to-interference ratio provides a measure of the relative strength of the wanted signal ("C") to that of the interfering signal ("I").

[169] *See* DIRECTV Comments on Northpoint's Petition at 7.

of the DBS licensees raise issues which require us to approach cautiously this type of operation in the DBS bands and seek further technical analyses on its ability to share the spectrum with DBS operations. For example, would Northpoint operations in the DBS bands cause harmful degradation of DBS to customers? Is the exclusion zone around each Northpoint transmitter small enough not to inhibit ubiquitous DBS service? Are the possible mitigation techniques and technical parameters suggested by Northpoint viable technical solutions to minimize the size of the exclusion zone, as well as facilitate DBS reception within this "zone"? Is Northpoint's technology designed with sufficient availability to be offered simultaneously with DBS to consumers? In addition, future analyses need to consider all DBS orbital positions that provide service to any geographic area throughout the U.S.[170] We believe it is important to address these and other technical issues prior to approving Northpoint operations in the 12.2-12.7 GHz band. We request comment and further analysis on spectrum sharing between DBS and Northpoint that address these concerns.

96. *Northpoint sharing with NGSO FSS.* In this Notice, we are proposing NGSO FSS operations in the Ku-band on a co-primary basis with incumbent services. We note, however, that in the 12.2-12.7 GHz bands, NGSO FSS and the proposed Northpoint technology may not be able to operate compatibly. Northpoint questions whether the provisional power limits adopted at WRC-97 would protect its system.[171] SkyBridge believes that these pfd limits would protect Northpoint, but asserts that Northpoint would cause interference to NGSO FSS.[172] There is no technical analysis in the record to support either party's assertion. Accordingly, we ask for comment regarding the feasibility of the two services sharing the same spectrum, such as, whether the WRC-97 pfd limits adopted to protect terrestrial services would be adequate to protect Northpoint's technology. We note that regardless of any action to allocate NGSO FSS to the 12.2-12.7 GHz band domestically, the ITU regulations could permit NGSO FSS satellites to transmit over the U.S. as long as they meet ITU limits. In addition, we request comment on what criteria would be necessary to protect NGSO FSS downlinks from interference from Northpoint.

97. If NGSO FSS and Northpoint type systems cannot share spectrum with each other in this band, but each service can share spectrum with DBS, we ask for comments on whether both NGSO FSS and Northpoint uses could be accommodated by other means. For example, would it be feasible to segment the DBS band to accommodate both new services sharing with DBS. We request comment and further analysis on this issue, including the amount of spectrum that each type of system would need and the ability to authorize multiple NGSO FSS or Northpoint systems, if we were to segment the band.

98. In conclusion, we believe that Northpoint has not provided sufficient information or analysis to demonstrate conclusively that its technology would not cause harmful interference to

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[170] U.S. DBS orbital positions on the geostationary satellite orbit range from 61.5° W.L. to 175° W.L. DBS receive earth stations may be located within the continental U.S., Hawaii, Alaska, Puerto Rico and the U.S. Virgin Islands.

[171] *See* Northpoint's Petition at 18.

[172] *See* SkyBridge Comments on Northpoint's Petition at 23.

DBS. Accordingly, we find it premature to make any proposals based on Northpoint's petition at this time. We request further information, as outlined in the preceding paragraphs, to allow us to develop a more comprehensive record regarding protection of DBS systems. In addition, we believe that our questions will allow us to compile technical analyses of the sharing potential of Northpoint and NGSO FSS.