

Federal Communications Commission  
Washington, D.C. 20554

March 23, 2001

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Suite 1300  
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1330 Connecticut Ave., N.W.  
Washington D.C. 20036

**Re: Communications Regarding the Independent Demonstration  
Required by Section 1012 of the CJSJ Appropriations Act.**

Dear Madame/Sirs:

On January 24, 2001, several entities and counsel interested in the congressionally mandated independent demonstration of MVDDS systems met at MITRE headquarters in McLean, Virginia. At that meeting, several process and ground rule questions were discussed. This letter is intended to serve as a reminder to ensure that the interested parties and their counsel continue to all follow the same procedures.

Question: Will the Statement of Work be publicly available?

Answer: Yes. A copy is attached and has been placed in the record in ET Docket No. 98-206.

**Federal Communications Commission**

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Question: Will MITREs test plan and interim progress reports be publicly available?

Answer: No. Pursuant to Section 0.457 of the Commission's Rules, this category of materials would not routinely be available for public inspection.

Question: How can transparency of communications with MITRE be facilitated?

Answer: Consistent with the preliminary agreement among the interested parties present at the January 24, 2001 meeting, each of the addressees of this letter should serve copies of their communications with MITRE, pertaining to this project, on all parties identified as addressees of this letter. In addition, each of the addressees of this letter should submit to the Commission's Secretary for inclusion in ET Docket No. 98-206, two copies of all such written communications, and full and complete summaries of the substance of all such oral communications. Copies should also be sent to Mr. James Chadwick at The MITRE Corporation.

Question: Will MITRE maintain a log of all communications with the parties?

Answer: No. The filings in ET Docket No. 98-206 will serve as the log of communications between MITRE and the interested parties.

Question: Will MITRE set up individual meetings with the relevant interested parties?

Answer: Pursuant to the contractual agreement between the FCC and MITRE, the design and conduct of the independent demonstration or analysis is within the discretion of MITRE. As such, the degree to which MITRE interacts with the interested parties is entirely within the discretion of MITRE.

Should other process questions arise, please do not hesitate to contact me.

Sincerely,



Rebecca Dorch  
Deputy Chief, Office of Engineering and Technology  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W.  
Washington, DC 20554

Attachment

Cc: Mr. James Chadwick  
The MITRE Corporation  
Mail Stop W300  
1820 Dolley Madison Blvd.  
McLean, VA 22102-3481

TECHNICAL DEMONSTRATION OR ANALYSIS  
OF POTENTIAL HARMFUL INTERFERENCE TO DBS  
FROM PROPOSED TERRESTRIAL SERVICES IN THE 12.2 – 12.7 GHz BAND

## 1. BACKGROUND

The 12.2-12.7 GHz band is used to provide Direct Broadcasting Service (DBS), via geostationary satellites, to over 13 million homes in the United States. In 1999, Broadwave USA, a subsidiary of Northpoint Technologies, Inc., petitioned the Federal Communications Commission (FCC) for authority to provide a new Multichannel Video Distribution and Data Service (MVDDS) in the 12.2 – 12.7 GHz band using terrestrial retransmission towers. (Reference 1a.). Two other companies, PDC Broadband Corporation, and Satellite Receivers, Ltd., also filed applications with the FCC to provide MVDDS service. (References 1b, 1c).

The FCC issued a Report and Order (R&O) and Further Notice of Proposed Rule Making (FNPRM) in ET Docket 98-206 on December 8, 2000 that addresses the proposed MVDDS service. (Reference 3 and Attachment E). The R&O discusses the issue of harmful interference, and concludes that sharing of the band by DBS and MVDDS is feasible if certain precautions are taken. The FNPRM seeks comments on rules for spectrum sharing, licensing and other operating requirements.

This Statement of Work responds to the statutory provision in the FCC's FY2001 budget authorization (Reference 4 and Attachment D) that requires the FCC to select an engineering firm or other qualified entity independent of any interested party, to perform a technical demonstration or analysis to determine whether the terrestrial service technology proposed will cause harmful interference to any direct broadcast satellite service. The statute requires the demonstration to be concluded within 60 days after the date of enactment of the Act.

## 2. TASK DESCRIPTION

### 2.1 Caveats.

The Contractor shall carry out all the tasks as an independent technical consultant. In particular, the Contractor shall ensure that the personnel performing the tasks do not have any financial or other material interests in any party to the technical demonstration. (Reference 5)

### 2.2 Objective.

The objective of the tasks is to perform a technical demonstration or analysis of any terrestrial service technology proposed by any entity that has filed an application to provide terrestrial service in the direct broadcast satellite frequency 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. (Reference 4 and Attachment D)

### 2.3 Specific Tasks.

The contractor shall perform the following tasks, as a minimum:

1. Contact the appropriate parties in each of the relevant companies to obtain any technical information, equipment, and/ or specifications needed for the demonstration or analysis. References 1 and 2 provide, as guidance, some relevant contact information.
2. Develop a work plan to perform all demonstrations or analyses needed to comply with the statutory requirements. (Reference 4).
3. Prepare progress reports on the status of the demonstration or analysis.
4. Prepare a Final Report that fully describes the demonstration or analysis and provides conclusions. The Final Report must include relevant supporting information regarding the data, equipment, specifications and analyses used, discuss how demonstrations or analyses were performed, and provide the basis upon which conclusions were reached. The Final Report will be made available by the FCC for public comment.

### 3. SCHEDULE AND DELIVERABLES

The Contractor shall propose a schedule consistent with the completion deadline. The following dates are suggested as guidelines:

- 3.1 Work Plan: delivered to the FCC 10 calendar days after the award of the contract.
- 3.2 Progress Reports: delivered to the FCC each Monday summarizing work completed the previous week.
- 3.3 Final Report: delivered to the FCC on or before 2/20/01.

### 4. COST PROPOSAL

- The work plan shall provide a breakdown of the costs of various tasks, itemizing the costs of labor, material, travel, overhead, etc.

### 5. FCC CONTACT

The deliverables required in Paragraph 3 shall be provided to:

Office of Engineering and Technology  
Federal Communications Commission  
Room 7C153  
445 12<sup>th</sup> Street, S.W.  
Washington, DC 20554

### 6. REFERENCES

- 1a. Representing Broadwave USA:  
Antoinette Cook Bush, Esq.  
Executive Vice President

Broadwave U.S.A.  
400 N. Capitol St., NW  
Suite 400  
Washington D.C. 20001  
(202) 737-5711

1b. Representing PDC Broadband Corporation

David D. Oxenford, Esq.  
Shaw Pittman  
2300 N St., N.W.  
Washington, D.C. 20037  
(202) 659-3494

1c. Representing Satellite Receivers, Ltd.:

Nathaniel J. Hardy, Esq.  
Irwin, Campbell & Tannenwald, P.C.  
1730 Rhode Island Ave.  
Suite 200  
Washington D.C. 20036-3101  
(202) 728-0401

2a. Representing DirecTV:

James H. Barker, III, Esq  
Latham & Watkins  
1001 Pennsylvania Ave., N.W.  
Suite 1300  
Washington, D.C. 20004-2505  
(202) 637-2200

2b. Representing Echostar Technologies:

Pantelis Michalopoulos, Esq.  
Steptoe & Johnson, LLP  
1330 Connecticut Ave., N.W.  
Washington D.C. 20036  
(202) 429-3000

*3. 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 Rule 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, PCD Broadband Corporation, and Satellite Receivers, Ltd. To Provide a Fixed Service in the 12.2-12.7 GHz Band, ET Docket No. 98-206, First Report and Order and Further Notice of Proposed Rule Making, FCC 00-418, released December 8, 2000.*

4. Legislation: Section 1012, Prevention of Interference to Direct Broadcast Satellite Services, in the Commerce, Justice, State and Judiciary Appropriations Act, signed into law on December 21, 2000. (Attachment D)

5. Parties to FCC ET Docket No. 98-206 (Appendix D in Attachment E).

7. ATTACHMENTS:

- A. Application of Broadwave USA for terrestrial service in the 12.2-12.7 GHz band.
- B. Application of PDC Broadband Corporation for terrestrial service in the 12.2-12.7 GHz band.
- C. Application of Satellite Receivers, Ltd. For terrestrial service in the 12.2-12.7 GHz band.
- D. Section 1012 of the Commerce, Justice, State and Judiciary Appropriations Act.
- E. *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 Rule 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, PCD Broadband Corporation, and Satellite Receivers, Ltd. To Provide a Fixed Service in the 12.2-12.7 GHz Band*, ET Docket No. 98-206, First Report and Order and Further Notice of Proposed Rule Making, FCC 00-418, released December 8, 2000.

**RECEIVED**

JAN - 8 1999

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

January 8, 1999

Magalie Roman Salas  
Secretary  
Federal Communications Commission  
1919 M Street, N.W., Room 222  
Washington, D.C. 20554

Re: Broadwave Atlanta, LLC  
Application for License to Provide a New Terrestrial Transport Service in the  
12.2.-12.7 GHz Band  
Atlanta DMA

Dear Ms. Salas:

Enclosed for filing please find a paper original and 9 copies of the above-referenced license application. The application seeks authority for the Applicant to provide a new terrestrial transport service in the 12.2-12.7 GHz band to deliver multi-channel video programming (in particular, all of the local television broadcast signals in the market – both analog and digital) as well as Internet services. Significantly, grant of the application would advance Congressional and Commission goals of increasing diversity of ownership in the telecommunications industry.

The filing of the applications today is triggered by the Commission's Public Notice<sup>1</sup> establishing January 8, 1999, as the cut-off deadline for applications that would be mutually exclusive with Skybridge, LLC's application for use of the 12.2-12.7 GHz band.<sup>2</sup> While the applicants believe that non-interfering use of the band for both multi-channel video service and Skybridge might be possible, there are no assurances that this will be the case absent changes in

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<sup>1</sup> *FCC Public Notice: Cut-Off Established for Additional Applications and Letters of Intent in the 12.75-13.25 GHz, 13.75-14.5 GHz and 10.7-12.7 GHz Frequency Bands, Report No. SPB-141 (Nov. 2, 1998).*

<sup>2</sup> *See Application of Skybridge LLC, File Nos. 48-SAT-P/LA-97, 89-SAT-AMEND-97, 130-SAT-AMEND-98 (filed Feb. 28, 1997).*

Ms. Magalie Roman Salas  
January 8, 1999  
Page 2

the Skybridge proposal. Accordingly, the undersigned applicant has submitted a timely application to be considered by the Commission.

Respectfully submitted,

BROADWAVE ATLANTA, LLC

cc: Skybridge, LLC

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JAN - 8 1999

1) Radio Service Code:  
See Exhibit 1

Application Purpose (Select only one) (NE)

FEDERAL COMMUNICATIONS COMMISSION

2) NE - New MD - Modification AM - Amendment	RO - Renewal Only RM - Renewal/Modification CA - Cancellation of License	CO - Consolidate Call Signs WD - Withdrawal of Application DU - Duplicate License	NT - Required Notifications EX - Requests for Extension of Time
3) If this request is for a Developmental License or an STA (Special Temporary Authorization), enter the appropriate code; otherwise enter N (Not Applicable).			(N) <input type="checkbox"/> D <input type="checkbox"/> S <input type="checkbox"/> N/A
4) If this request is for an Amendment or Withdrawal, enter the file number of the pending application currently on file with the FCC.			File Number N/A
5) If this request is for a Modification, Renewal Only, Renewal/Modification, Cancellation of License, Consolidate Call Signs, or Duplicate License, enter the call sign of the existing FCC license.			Call Sign N/A
6) If this request is for a New, Amendment, Renewal Only, or Renewal/Modification, enter the requested authorization expiration date (this item is optional).			MM DD
7) If this request is for a Modification, Renewal/Modification, or Amendment of a currently pending Modification of a site-specific authorization, will the request increase or expand the coverage area, service area, or interference contour of the authorization as defined in the Commission's rules for the radio service identified in Question 1?			( ) Yes No N/A
8) Does this filing request a Waiver of the Commission's rules?			(Y) Yes No

Applicant Information

9a) Taxpayer Identification Number: Not yet available.		9b) Sub-TIN:	
10) Licensee is a(n): (L) Individual Unincorporated Association Trust Government Entity Joint Venture Corporation Limited Liability Corporation Partnership Consortium			
11) First Name (if individual): N/A	Mi:	Last Name: N/A	Suffix:
12) Entity Name (if other than individual): Broadwave Atlanta, LLC			
13) Name of Real Party in Interest of Applicant: See Exhibit 4		14) Taxpayer Identification Number:	
15) Attention To: David Salzman			
16) P.O. Box:	And /Or	17) Street Address: 5842 Sunset Blvd., Bldg 11, 2nd Floor	
18) City: Hollywood	19) State: CA	20) Zip: 90028	
21) Telephone Number: (323) 860-8988		22) FAX: (323) 860-8987	
23) E-Mail Address:			
24) Do you want all correspondence and your authorization E-Mailed rather than sent via the U.S. mail? *If the answer to item 24 is 'Yes', be sure to include a valid E-Mail address in Item 23 and Item 34.			(N) Yes No

Contact Information (If different from the applicant)

25) First Name: Sophia	MI:	Last Name: Collier	Suffix:
26) Entity Name: Northpoint Technology			
27) P.O. Box:	And /Or	28) Street Address: 230 Commerce Way, Suite 300	
29) City: Portsmouth		30) State: NH	31) Zip: 03801
32) Telephone Number: (603) 436-5152		33) FAX: (603) 433-4209	
34) E-Mail Address: scollier@citizensfunds.com			

Regulatory Status

35) This filing is for authorization to provide or use the following type(s) of radio service offering (enter all that apply):

Common Carrier       Non-Common Carrier       Private, internal communications

Type of Radio Service

36) This filing is for authorization to provide the following type(s) of radio service (enter all that apply):

Fixed       Mobile       Radiolocation       Satellite (sound)

37) Interconnected Service?  Yes     No

Fee Status

38) Is the applicant exempt from FCC application fees?    See Exhibit 3       Yes     No

39) Is the applicant exempt from FCC regulatory fees?       Yes     No

40) If 'Yes', does applicant qualify as a Non-Commercial Educational Broadcaster?       Yes     No

Alien Ownership Questions

41) Is the applicant a foreign government or the representative of any foreign government?  
If 'Yes', attach exhibit explaining circumstances.  Yes     No

42) Is the applicant an alien or the representative of an alien?  
If 'Yes', attach exhibit explaining circumstances.  Yes     No

43) Is the applicant a corporation organized under the laws of any foreign government?  
If 'Yes', attach exhibit explaining circumstances.  Yes     No

44) Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?  
If 'Yes', attach exhibit explaining circumstances.  Yes     No

45) Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?  
If 'Yes', attach exhibit explaining nature and extent of alien or foreign ownership or control  Yes     No

**Basic Qualification Questions**

46) Has the applicant or any party to this application or amendment had any FCC station authorization, license, or construction permit revoked or had any application for an initial, modification or renewal of FCC station authorization, license, construction permit denied by the Commission? If 'Yes', attach exhibit explaining circumstances.	(N) Yes No
47) Has the applicant or any party to this application or amendment, or any party directly or indirectly controlling the applicant, ever been convicted of a felony by any state or federal court? If 'Yes', attach exhibit explaining circumstances.	(N) Yes No
48) Has any court finally adjudged the applicant or any party directly or indirectly controlling the applicant guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement, or any other means or unfair methods of competition? If 'Yes', attach exhibit explaining circumstances.	(N) Yes No
49) Is the applicant or any party directly or indirectly controlling the applicant, currently a party in any pending matter referred to in the preceding two items? If 'Yes', attach exhibit explaining circumstances.	(N) Yes No

**General Certification Statements**

1) The applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application.
2) The applicant will have unlimited access to the radio equipment and will control access to exclude unauthorized persons.
3) The applicant certifies that grant of this application would not cause the Applicant to be in violation of the spectrum aggregation limit in 47 CFR Part 20.
4) The applicant certifies that the signature is that of the individual, partner, or officer or duly authorized employee of a corporation, or officer who is a member of an unincorporated association, or a duly authorized employee of the entity.
5) The applicant certifies that all statements made in exhibits, attachments, or in documents incorporated by reference are material, are part of this application and are true, complete, correct, and made in good faith.
6) The applicant certifies that neither the applicant nor any other party to the application is subject to a denial of Federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 882, because of a conviction for possession or distribution of a controlled substance. See Section 1.2002(b) of the rules, 47 CFR 1.2002(b) for the definition of 'party to the application' as used in this certification.

**Signature**

50) Typed or Printed Name of Party Authorized to Sign

First Name: David	MI	Last Name: Salzman	Suffix:
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51) Title: Secretary

Signature: 	52) Date: 1/8/99
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**Failure To Sign This Application May Result In Dismissal Of The Application And Forfeiture Of Any Fees Paid**

**WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, Section 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).**

Market/Channel Block

1) Market Designator	2) Market Name	3) Channel Block	4) Sub-Market Designator
	Atlanta DMA		
	See Exhibit 1		

Environmental Data (if required)

5) Would a Commission grant of Authorization for any locations won in an auction be an action which may have a significant environmental effect as defined by Section 1.1307 of 47 CFR? (N) Yes No  
If "Yes", complete Items 6 through 10 for each affected location and also submit an environmental assessment, as required by 47 CFR, Sections 1.1308 and 1.1311.

6) NAD83 Latitude (DD-MM-SS.S-D)	7) NAD83 Longitude (DDD-MM-SS.S-D)	8) City	9) County	10) State
( ) N or S	( ) E or W			
( ) N or S	( ) E or W			
( ) N or S	( ) E or W			
( ) N or S	( ) E or W			
( ) N or S	( ) E or W			

Certifications

For Applicants Claiming Eligibility as an Entrepreneur Under the General Rule

Applicant certifies that they are eligible to obtain the licenses for which they apply.

For Applicants Claiming Eligibility as a Publicly Traded Corporation

Applicant certifies that they are eligible to obtain the licenses for which they apply and that they comply with the definition of a Publicly Traded Corporation, as set out in the applicable FCC rules.

For Applicants Claiming Eligibility using a Control Group Structure

Applicant certifies that they are eligible to obtain the licenses for which they apply.  
Applicant certifies that the applicant's sole control group member is a pre-existing entity, if applicable.

For Applicants Claiming Eligibility as a Very Small Business, Very Small Business Consortium, Small Business, or as a Small Business Consortium

Applicant certifies that they are eligible to obtain the licenses for which they apply.  
Applicant certifies that the applicant's sole control group member is a pre-existing entity, if applicable.

For Applicants Claiming Eligibility as a Rural Telephone Company

Applicant certifies that they meet the definition of a Rural Telephone Company as set out in the applicable FCC rules, and must disclose all parties to agreement(s) to partition licenses won in this auction. See applicable FCC rules.

WTB Ownership Form

For Commercial Mobile Radio, Auctionable Fixed Microwave and Personal Radio Services

Approved by OMB  
3060-0799  
See instructions for  
public burden estim

1a) Name of Real Party in Interest (i.e., showing de facto and de jure control):	1b) Taxpayer Identification Number:
See Exhibit 4	
2a) List of all Owned Licensees holding CMRS, PMRS, or Common Carrier Microwave Licenses (use additional sheets, if necessary):	2b) Taxpayer Identification Number:
See Exhibit 4	

## Exhibit 1: Overview of Proposed Service

### *Brief Description of Service*

The Applicant proposes to utilize the 12.2-12.7 GHz frequency band on a terrestrial basis in the proposed market to deliver to consumers multichannel video programming (in particular, all of the local television broadcast signals in the market – both digital and analog) as well as Internet services. The applicant will use patented technology developed by Northpoint Technology to enable sharing of the band with existing Direct Broadcast Satellite (“DBS”) and terrestrial licensees on a non-interference basis.

The key to the technology developed by Northpoint is that existing consumer DBS antennas are able to discriminate between signals emanating from different satellite orbital “slots” over the equator separated by only 9 degrees.<sup>1</sup> As a result, Northpoint was able to develop a technology that, in effect, creates a terrestrial orbital slot whereby DBS spectrum can be re-used in different local markets without harmful interference to existing DBS services. This basic technology creates sufficient capacity in the 12.2-12.7 GHz band to deliver all of the local broadcast television signals in the market, both NTSC and DTV stations,<sup>2</sup> as well as to deliver high-speed Internet and other services.<sup>3</sup>

Conceptually, the Northpoint technology to be used by the Applicant utilizes the generally southerly orientation of domestic DBS dishes to avoid interference with conventional DBS services. By using directional terrestrial transmitters pointed south, the signals arrive at the “back” of standard consumer DBS dishes and are not received or noticed by the subscriber as interference to the existing DBS video programming. With the addition of a second dish pointed north, however, the subscriber would be able to receive the wholly different transmission from the Applicant. Further, because this technology operates in the same band, and uses the same digital encoding, as conventional DBS, most of the equipment necessary to deploy the

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<sup>1</sup> These existing DBS systems are able to co-exist without mutually harmful interference because end-user DBS satellite receivers are directional and can be oriented to a signal emanating from a specific orbital slot while suppressing signals from other orbital slots. In some cases (e.g., East and West Coast users), the inability to “see” some orbital slots also aids in mitigating harmful interference.

<sup>2</sup> The Applicant certifies that it is willing to accept must carry obligations toward this end.

<sup>3</sup> This technology would allow similar terrestrial sharing in any spectrum allocated for geosynchronous satellite systems.

Applicant's proposed system is currently being manufactured, thus permitting rapid service deployment.

### *Public Interest Benefits of the Proposed Service*

FCC action to permit the deployment of the Applicant's proposed service would clearly serve the public interest by furthering important Congressional and FCC goals. First, and most significantly, grant of the instant application would finally permit the deployment of a multichannel video distribution system that can compete head-to-head with the local cable monopoly. By enabling the provision of all local broadcast signals and Internet capabilities, the proposed system would constitute a true competitive alternative, with resulting benefits to consumers in terms of lower rates and quality of service.

Second, deployment of this technology would promote localism and address community needs by increasing the availability of programming from local television stations. As indicated above, the proposed system would be able to carry – and is committed to carrying – all local broadcast television stations in the market, both NTSC and DTV stations. This would increase the availability of these important local voices to all residents in the market.

Third, this technology will add to the diversity of ownership in the provision of multichannel video programming. The relatively low cost of building out the necessary infrastructure for this system in a given market<sup>4</sup> makes it a viable business opportunity for small entrepreneurs and minority- or women-owned entities, like the Applicant. Both Congress and the FCC have previously recognized the benefits of increasing diversity within the industry.

Fourth, deployment of this technology would advance often-articulated Congressional goals for encouraging the deployment of advanced telecommunications capabilities (particularly

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<sup>4</sup> For example, Northpoint has estimated that the cost to build-out the 2400 square mile city environ of Dallas-Ft. Worth, Texas would cost only \$6.5 million. This constitutes a cost per channel of \$203,125.00 and a cost per household of \$4.78.

<sup>5</sup> See, e.g., Remarks of William E. Kennard, Chairman, Federal Communications Commission to National Black Media Coalition Master Communicators Award Luncheon (December 2, 1998) (“This is the time to redouble our efforts – to utilize every legal, judicial and legislative measure possible to ... create opportunity in the media for minorities and women.”); *Notice of Proposed Rulemaking* in MM Docket Nos. 94-149 and 91-140, 10 FCC Rcd 2788 (1994) (inviting comment on initiatives to increase ownership of mass media facilities by minorities and women to further a “core” Commission goal of maximizing diversity of points of view available to the public); 47 U.S.C. § 309(i)(3)(A) (establishing “an additional significant preference” to applications controlled by minority groups to “further diversify the ownership of the media of mass communications”).

Internet services) to all Americans.<sup>7</sup> By providing increased availability of and capabilities for such services, the Applicant's proposed service would promote this Congressional policy.

Finally, this technology would promote recognized goals of spectrum efficiency as it would provide an innovative means to re-use spectrum within the 12.2-12.7 GHz band, thereby increasing overall capacity and efficiency.

### *Proposed Service Area*

The Applicant proposes to provide service within the particular Designated Market Area ("DMA") identified on Schedule B of the FCC Form 601.<sup>8</sup> The Applicant believes that licensing on a DMA basis is most appropriate for its proposed service. For regulatory and advertising purposes, television markets are often defined as a DMA because this type of service area effectively identifies local areas of common interest. As indicated above, the Applicant envisions that a critical component of its service will be the distribution of all local broadcast television signals in the market area. Accordingly, DMAs seem the most appropriate market designation for the Applicant's service.

Further, because of the manageable size of each DMA, local and minority- or women-ownership of the proposed system is possible. Unlike the larger service areas adopted recently for certain common carrier wireless services, the intimate, local nature of DMAs encourages the involvement of local entrepreneurs and minority- or women-owned business, like the Applicant.

In the alternative, if the Commission decides to license the proposed service on the basis of a different type of service area, the Applicant requests authority to provide its proposed service with the designated market area encompassing its identified DMA.

### *Mutually Exclusive Application*

As discussed above, the Applicant proposes to utilize the 12.2-12.7 GHz band to provide its service. While such use would be secondary to existing DBS operators in the band, it would

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<sup>8</sup> 47 U.S.C. § 157.

As DMAs are subject to adjustment each year, the 1998 DMAs as specified by Nielsen Media Research are used by the Applicant. DMAs are selected by totaling the viewer hours of TV stations, whose signals reach a particular county, with total hours then converted to a percentage share of all viewing hours. The name of a DMA is assigned according to the market of origin of the station(s) with the largest share of viewer hours. All counties whose largest viewer share is given to stations in that same market of origin are grouped together under that particular DMA.

legally be co-primary with any Fixed Satellite uses, such as that proposed by Skybridge LLC. Further, at this time, it has not yet been determined whether the Applicant's proposed service and that of Skybridge can co-exist within the band (along with previously authorized users).<sup>9</sup> It is therefore appropriate for the Applicant to be submitting its application in response to the cut-off notice concerning Skybridge's application.<sup>10</sup> The instant application should accordingly be treated as mutually exclusive with Skybridge's pending application for this band<sup>11</sup> as well as with any additional applications or letters of intent seeking to use this band in the DMA identified herein.

#### *Environmental Assessment Issues, Part 17 Antenna Guidelines*

An authorization of the facilities is not categorically excluded under Section 1.1306 of the Commission's Rules.<sup>12</sup> The Applicant will look at each site on a case-by-case basis to determine if an Environmental Assessment is needed. Further, the Applicant will comply with all FCC and FAA antenna requirements. The antennas will be mounted either: (1) not higher than 20 feet above ground or 20 feet above a building; (2) on an FAA-approved structure in a manner that

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<sup>9</sup> The domestic table of allocations (47 C.F.R. § 2.106) provides for the secondary operations of fixed microwave systems with respect to Direct Broadcast Satellite operations. However, the Applicant's system would not be secondary to non-geostationary Fixed Satellite Service ("NGSO FSS") operations. Under the international table of allocations, both fixed microwave systems and fixed satellite systems share co-primary status. See S5.487A footnote added at WRC-97.

<sup>9</sup> See 47 C.F.R. § 101.45.

<sup>10</sup> See *FCC Public Notice: Cut-Off Established for Additional Applications and Letters of Intent in the 12.75-13.25 GHz, 13.75-14.5 GHz and 10.7-12.7 GHz Frequency Bands*, Report No. SPB-141 (Nov. 2, 1998) [hereinafter "Skybridge Cut-Off Notice"]. The Skybridge Cut-Off Notice specifically requests the submission of any of the following: (1) an application for a space station license, (2) an application for an earth station that will communicate with a non-U.S.-licensed satellite; or (3) a letter of intent to use a non-U.S. licensed satellite to provide service in the U.S. Nevertheless, the Applicant submits that its application is appropriately filed as it proposes a potentially mutually exclusive use of the 12.2-12.7 GHz band. To the extent that any waivers are necessary to permit consideration of the instant application, the Applicant requests such waivers in Exhibit 3.

<sup>11</sup> See Application of Skybridge LLC, File Nos. 48-SAT-P/LA-97, 89-SAT-AMEND-97, 130-SAT-AMEND-98 (filed Feb. 28, 1997).

<sup>12</sup> See 47 C.F.R. § 1.1306.

will not exceed the approved height (e.g., side mounted below the approved height) or (3) in a manner that does not require FAA approval.

## Exhibit 2: Engineering Technical Parameters Exhibit

### *Background*

The Applicant will utilize patented Northpoint Technology to provide service within the underlying service area. Northpoint Technology utilizes the generally southerly orientation of domestic Direct Broadcast Satellite ("DBS") dishes to avoid interference with conventional DBS services in the 12.2 to 12.7 GHz band. By using directional terrestrial transmitters pointed south, the Applicant's signals arrive at the "back" of standard consumer DBS dishes and are not received or noticed by the subscriber as interference to the existing DBS video programming. With the addition of a second dish pointed north, however, the subscriber would be able to receive the Applicant's wholly different transmission.

The Applicant's system within the proposed service area will be comprised of multiple transmitter sites offering identical, simultaneous transmissions. The Applicant anticipates that the average coverage contour of each transmitter will be approximately a 10 mile radius, although this will vary with terrain and coverage requirements. Indeed, each individual service area will have its own particular issues and discrepancies with respect to DBS rollout, climatic conditions and availability of tower sites, among other factors. Thus, while a link budget can be prepared for a typical locale, different areas will likely warrant deployment of a system with higher or lower power, greater or lesser antenna height, beam tilt, or other modifications of transmission characteristics. Therefore, maximum values for each of these parameters are specified for the Applicant's system under **Transmit Information** in this exhibit.

Furthermore, the Applicant will provide a Carrier-to-Interference (C/I) protection ratio to DBS subscribers of 20 dB to the vast majority of the proposed service area.<sup>1</sup> While there may be limited areas immediately adjacent to the Applicant's planned transmission sites (generally less than 0.5 percent of the coverage area) where the 20 dB ratio cannot be attained ("mitigation zones"), such areas can be reduced or even eliminated through additional engineering techniques.<sup>2</sup>

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<sup>1</sup> DBS providers have indicated that a 20 dB C/I ratio would be sufficient to protect their operations. See Comments of Tempo Satellite, Inc., RM-9245 at ¶ 5 (filed April 20, 1998); Opposition of Echostar Communications Corporation, RM-9245 at 9 (filed April 20, 1998).

<sup>2</sup> C/I Ratio is maintained by the use of interference mitigation techniques such as increasing tower height, beam tilt and attenuation in the vertical plane. In the few cases where the 20 dB ratio is not maintained, acceptable DBS operations may be provided on a case-by-case basis.

Additionally, the Applicant will not deploy transmitter sites in an arbitrary manner. Instead, transmit sites will be located strategically with interference minimization in mind. In many cases, interference-free operation can be guaranteed through the use of property rights. For example, where the affected area is owned by the terrestrial licensee, it can be assured that no DBS receivers will be present in the mitigation zone. Where this is not possible, siting areas can still easily be identified in which the population density is far lower than the average throughout the service area. Thus, even in a scenario where the mitigation zone may comprise 0.5 percent of the land area, the percentage of the service area population within the mitigation zone can be designed to be far, far less than 0.5 percent of the served inhabitants.

### *Technical Criteria*

As discussed above, the Applicant will use a variety of technical parameters in implementing its wide area system throughout the market. In order to most efficiently implement its system and alleviate interference to DBS subscribers, each individual base station location will be carefully engineered to ensure adequate performance and minimize interference. A typical system would operate with an EIRP of 12.5 dBm, if it was located in close proximity of DBS subscribers. However, if a system was constructed in an area removed from existing DBS subscribers, it would have more leeway to use considerably higher EIRP. As such, the following values contemplated for the Applicant's base stations should be treated as maximum parameters that will be adjusted to guarantee optimal operation of the Applicant's system as well as DBS systems.

### **Transmit Information**

Frequency Range	12.2 to 12.7 GHz
Maximum Transmit EIRP	45 dBm
Emission Type	G7W
Transmit Antenna Beamwidth	110 degrees (in the horizontal plane)
Maximum beam tilt	5 degrees

**Exhibit 3: Request for Waiver of Rules Necessary  
to Process Application and Deploy Service**

*Applicable Waiver Standard*

The Commission has broad authority to waive any of its rules.<sup>1</sup> Section 1.3 of the Commission's Rules provides that "[a]ny provision of the rules may be waived by the Commission on its own motion or on petition if good cause therefor is shown."<sup>2</sup> Similarly, Section 101.23 of the Commission's rules asserts that waiver of any Part 101 rules may be granted if:

- (a) The underlying purpose of the rule will not be served, or would be frustrated, by its application in the particular case, and that grant of the waiver is otherwise in the public interest; or
- (b) The unique facts and circumstances of a particular case render application of the rule inequitable, unduly burdensome or otherwise contrary to the public interest.<sup>3</sup>

The Applicant submits below that its request for any waivers necessary to process the application and deploy service squarely meets this standard.

*Application Requirements*

The Applicant's proposed operations do not exactly fit within any current radio service definition, although they are most analogous to the fixed microwave services. As such, in preparing the instant application, the Applicant used the application form and generally provided

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<sup>1</sup> *Omnipoint Corporation v. FCC*, 78 F.3d 620, 631 (D.C. Cir. 1996) (FCC may waive its rules for good cause). *See also WAIT Radio v. FCC*, 418 F.2d 1152, 1157 (D.C. Cir. 1969) ("an agency's discretion to proceed in difficult areas through general rules is intimately linked to the existence of a safety valve procedure for consideration of an application for exemption based on special circumstances").

<sup>2</sup> 47 C.F.R. § 1.3. Part 25 of the Commission's Rules, concerning satellite communications (such as that proposed by Skybridge), does not contain a specific waiver provision and, accordingly, would be governed by Section 1.3.

<sup>3</sup> 47 C.F.R. § 101.23.

information relevant to the licensing of such services. However, in order to accommodate its unique service proposal, the Applicant departed from this general approach in certain aspects to omit information not relevant to its proposal or include information not usually submitted with fixed microwave service applications. The Applicant accordingly requests any necessary waivers of the fixed microwave service rules to permit consideration and processing of its application. The Applicant's unique proposed operations clearly render application of such rules inequitable and contrary to the public interest.<sup>4</sup>

In addition, the Applicant is filing the instant application in response to the Skybridge Cut-Off Notice because the Applicant's proposed operations are potentially mutually exclusive with those proposed by Skybridge.<sup>5</sup> The Skybridge Cut-Off Notice specifically requests the submission of any of the following: (1) an application for a space station license, (2) an application for an earth station that will communicate with a non-U.S.-licensed satellite; or (3) a letter of intent to use a non-U.S. licensed satellite to provide service in the U.S. Nevertheless, the Applicant submits that its application is appropriately filed as it proposes a potentially mutually exclusive use of the 12.2-12.7 GHz band. Exclusion of the Applicant from this filing window could preclude its ability to ever offer its proposed service. To the extent required, the Applicant requests any waivers necessary to permit consideration of the instant application. Clearly, given the publicly beneficial nature of the service proposed and the important FCC and Congressional goals that it advances,<sup>6</sup> the good cause necessary for any such waiver is manifest here. The Commission clearly has authority to consider and process the instant application.<sup>7</sup>

#### *Part 101 Requirements*

The Applicant will be operating its system in accordance with Part 101 of the Commission's rules with certain exceptions.<sup>8</sup> Specifically, Sections 101.105, 101.107, 101.109,

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<sup>4</sup> See *id.* See also *Keller Communications, Inc. v. FCC*, 130 F.3d 1073 (D.C. Cir. 1997) *cert denied* 118 S.Ct. 2372 (1998) (FCC has authority to waive application defects); *WAIT Radio*, 418 F.2d at 1157 (D.C. Cir. 1969) ("a general rule, deemed valid because its overall objectives are in the public interest, may not be in the "public interest" if extended to an applicant who proposes a new service that will not undermine the policy, served by the rule, that has been adjudged in the public interest.")

<sup>5</sup> See 47 C.F.R. § 101.45. At this time, it has not yet been determined whether the Applicant's proposed service and that of Skybridge can co-exist within the band (along with previously authorized users).

<sup>6</sup> See Exhibit 1.

<sup>7</sup> See *Keller Communications*.

<sup>8</sup> See 47 C.F.R. Part 101.

101.111, 101.115, 101.139, and 101.603 contain provisions, primarily technical, that should not be applied to the Applicant's unique system. The Applicant submits that a waiver of the identified provisions is fully justified under the Commission's waiver standard.

Indeed, the technical rules for which waiver is requested (Sections 101.105, 101.107, 101.109, 101.111, and 101.115<sup>9</sup>) were designed to govern typical two-way, private or common carrier point-to-point microwave systems. In contrast, as made clear in Exhibit 1 of this application, the Applicant proposes a new, innovative communications system that is wide-area, one-way, and point-to-multipoint in nature. Thus, the identified technical limitations not only do not contemplate the unique service proposed by the Applicant, but are not relevant to such a system. As discussed in the prior exhibits, the Applicant will coordinate its use within its DMA service areas with all affected parties, ensuring that interference is mitigated and with full understanding that provision of service is secondary to Direct Broadcast Satellite ("DBS"). Application of point-to-point microwave requirements would serve no useful purpose, as the technical protection that these rules seek would not be garnered by application to the Applicant's service. Finally, application of these restrictions would clearly be contrary to the public interest as it would inhibit or even preclude the offering of Northpoint's proposed service – a service that for the first time would permit full head-to-head competition with the cable monopoly.

Section 101.39 requires that all equipment utilized under Part 101 be certified by the Commission.<sup>10</sup> The Applicant requests that this requirement be waived to permit the expedient provision of service to the public. Without relief from the Commission's certification requirements, lengthy delays are likely to occur as the Applicant awaits Commission approval of equipment. Given the publicly beneficial nature of the proposed service and the Applicant's ability otherwise to deploy the service expeditiously, waiver of this rule is clearly warranted. Absent a waiver, however, the Applicant asks that the Commission provide a methodology for expeditiously certifying equipment to be used for provision of service, including all technical parameters needed for certification, such as emission mask, power limitations, etc.

Finally, Section 101.603 prohibits the delivery of video entertainment material to customers in the 12.2 to 12.7 GHz band.<sup>11</sup> This prohibition seeks to protect private microwave spectrum from use by commercial interests for the provision of video entertainment material, rather than the delivery of normal, private data and telemetry information typically envisioned for private microwave spectrum. However, this requirement is inappropriate for the 12.2 to 12.7 GHz band, as this band has several unique features that the remainder of Part 101 spectrum does not face. First, the 12.2 to 12.7 GHz band is already used by DBS providers to deliver video entertainment to customers on a primary basis. Second, private point-to-point microwave

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<sup>9</sup> See 47 C.F.R. §§ 101.105, 101.107, 101.109, 101.111, 101.115.

<sup>10</sup> See 47 C.F.R. § 101.139.

<sup>11</sup> See 47 C.F.R. § 101.603.

systems no longer view the 12.2 to 12.7 GHz band as a viable alternative since any operations are secondary to DBS service. Therefore, the Applicant's proposed use of this spectrum, on a secondary basis to DBS service, would clearly advance the public interest not only by making available to the public a new innovative, competitive service, but also by permitting more efficient use of the scarce spectrum. Thus, waiver of Section 101.603 under these unique circumstances is reasonable and in the public interest.

*Fee Requirements*

The Commission's fee requirements for wireless service applications are provided in Section 1.1102.<sup>12</sup> While this section requires the filing of application fees for individual site applications for common carrier and private fixed point-to-point microwave licenses, no fee requirements have currently been imposed on the Applicant's proposed service.<sup>13</sup> Further, LMDS licensees and wide-area, common carrier point-to-multipoint licensees most similar to the applicant, do not have individual application fees specified within the Commission's rules. Therefore, the Applicant asserts that current application fees are inapplicable in this case, but if the Commission determines fee requirements, the Applicant will submit such appropriate fees as required.

\* \* \* \* \*

The Applicant has endeavored to identify herein rules for which waiver is necessary in order to process the instant application and deploy the proposed service as described. However, in the event that the Applicant has inadvertently omitted any rule provision that would preclude processing of the instant application, or impede or severely impair the provision of its service, it also requests authority for waiver of such a rule(s).

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<sup>12</sup> See 47 C.F.R. § 1.1102.

<sup>13</sup> New services implemented by the Commission require Congressional approval prior to the imposition of application fees.

#### **Exhibit 4: Ownership of Applicant**

The Applicant, Broadwave Atlanta, LLC, is a limited liability company organized under the laws of the state of Delaware. The Applicant is comprised of two members holding the following equity interests:

Broadwave Atlanta Partners, Inc. 5842 Sunset Blvd. Bld. 11, 2 <sup>nd</sup> Floor Hollywood, CA 90028	51%
Broadwave National Partners, LLC 230 Commerce Way Suite 300 Portsmouth, NH 03801	49%

A copy of the Applicant's certificate of formation will be provided to the Commission upon request.

Broadwave Atlanta Partners, Inc. is a corporation organized under the laws of the state of Delaware. The principal business of this entity is management of its investment in the Applicant. The corporation currently does not hold licenses in the Commercial Radio Services, the private Mobile Radio Services or the Point-to-Point Microwave Services. The following are the 5% or greater holders of voting stock of this company:

David Salzman 5842 Sunset Blvd. Bld. 11, 2 <sup>nd</sup> Floor Hollywood, CA 90028	50%
Sonia Salzman 5842 Sunset Blvd. Bld. 11, 2 <sup>nd</sup> Floor Hollywood, CA 90028	50%

The officers and directors of this company are as follows:

Sonia Salzman	President
David Salzman	Secretary and Treasurer

Broadwave National Partners, LLC is a limited liability corporation organized under the laws of the state of Delaware. The principal business of this entity is management of its investment in the Applicant. Broadwave National Partners, LLC is in turn a wholly-owned subsidiary of Broadwave Communications, Inc., which is in-turn a wholly owned subsidiary of Northpoint Technology Ltd.<sup>1</sup> Northpoint Technology, Ltd. is a limited partnership with the following partners:

NPT, Inc. <sup>2</sup>	1% general partner
Carmen Tawil	24.75% limited partner
Saleem Tawil	24.75% limited partner
Sophia Collier	23.25% limited partner
Katherine B. Reynolds	23.25% limited partner
J. Bonnie Newman	3% limited partner

The address of Broadwave National Partners, LLC, Broadwave Communications, Inc., Northpoint Technology Ltd., and NPT, Inc. is 230 Commerce Way Suite 300, Portsmouth, NH 03801. The limited partners may also be reached by mail at this address. Except as noted below, Broadwave Communications, Inc. ("BCI") and NPT, Inc. also share the same corporate officers and directors. They are as follows:

Sophia Collier	President and Director
Saleem Tawil	Vice President and Director
Carmen Tawil	Secretary and Director
Katherine B. Reynolds	Treasurer and Director
Mitchell A. Johnson	Director (BCI only)

Broadwave National Partners, LLC, Broadwave Communications, Inc., Northpoint Technology Ltd., and NPT, Inc. do not currently hold licenses in the Commercial Radio Services, the private Mobile Radio Services or the Point-to-Point Microwave Services.

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<sup>1</sup> However, Mitchell A. Johnson holds an option to acquire up to 3.5 percent of Broadwave Communications, Inc.

<sup>2</sup> NPT, Inc. is owned as follows:

Carmen Tawil	25%
Saleem Tawil	25%
Sophia Collier	23.5%
Katherine B. Reynolds	23.5%
J. Bonnie Newman	3%