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March 12, 2002

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

VIA HAND DELIVERY **EX PARTE**

William F. Caton
Acting Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: Notification of Ex Parte Communication in ET Docket 98-206; RM-9147; RM-9245; Applications of Broadwave USA et al., PDC Broadband Corporation, and Satellite Receivers, Ltd., to provide a fixed service in the d12.2-12.7 GHz Band; Requests of Broadwave USA et al. (DA 99-494), PDC Broadband Corporation (DA 00-1841), and Satellite Receivers, Ltd. (DA 00-2134) for Waiver of Part 101 Rules.

Dear Mr. Caton:

I write on behalf of Northpoint Technology, Ltd. to inform you that copies of attached letter addressed to Commissioner Copps regarding issuance of licenses without auctions were delivered today to all the Commissioners and their respective legal advisors, Peter Tenhula, Bryan Tramont, Paul Margie, Monica Desai and Sam Feder, as well as to the following Commission officials: Kenneth Ferree, Thomas Sugrue, Kathleen Ham, Donald Abelson, Edmond J. Thomas, and Bruce Franca.

Eighteen copies of this letter and its attachment are enclosed – two for inclusion in each of the above-referenced files. Please contact me if you have any questions.

Yours sincerely,

J.C. Rozendaal

J.C. Rozendaal
Counsel for Northpoint Technology, Ltd.

attachment

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List ABCDE

BroadwaveUSA™

Creating Cable Competition with Northpoint Technology

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March 12, 2002

Commissioner Michael Copps
Federal Communications Commission
445 Twelfth Street, S.W.
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Dear Commissioner Copps:

As a follow up to our earlier conversation regarding the Commission's processes for licensing ground-based services, we have prepared a detailed analysis of the Wireless Bureau's ground-based licensing actions in 2001. This analysis demonstrates that the majority of new ground-based services were processed without the use of competitive bidding, regardless whether measured in terms of the "number of licenses granted" or in terms of "MHz of new capacity."

In the year 2001, the Commission acted on 61,381 site-based license applications, 11,113 of which were grants of new licenses.[1] These licenses total an estimated 217,984 MHz of spectrum capacity.[2] In contrast, only 6,743 licenses, with an estimated 23,345 MHz of spectrum capacity,[3] were issued through competitive bidding in 2001.

Table 1. Summary of FCC Wireless Bureau Terrestrial License Actions in 2001.

	Not Auctioned	Auctioned	Total	Percent Auctioned
Number of New Licenses Granted	11,113	6,743	17,856	38%
MHz of Spectrum Capacity	217,984	23,345	241,329	10%

The fact that significantly less than half of the new licenses (and only 10% of the MHz of spectrum) were issued through an auction process directly refutes the common assumption that "all ground-based licenses are processed through auction." Clearly, this is not the case.

[1] See Annex, Table B, compiling FCC Public Notices in 2001
[2] See Table E
[3] See Table D

The Northpoint analysis excluded the licensing actions in 2001 by the Cable Bureau for Cable Area Relay Licenses ("CARS"), as well as excluding the licenses granted to Private Cable Operators ("PCO"). However, an analysis of data in a 2000 study by the NTIA[4] suggests that the results would be even more dramatic. According to the NTIA, there were 207,995 license holders in these two services as of 1997. As shown in Table A of the attachment to this letter, nearly half (94,000) of these licenses were issued after the Commission first obtained auction authority in 1993. Moreover, license grants increased an average of 11% each year. The FCC has never conducted an auction for any of these licenses and today continues to grant these licenses without an auction to cable operators throughout the United States.

An examination of the FCC's licensing record for both terrestrial wireless and satellite systems demonstrates that auctions are the exception—not the rule. Indeed, Northpoint's analysis shows that a number of common assumptions about the FCC's non-auctioned license approach are false. Key findings from 2001 include the following:

- Most non-auctioned licenses provide final links directly to end users, rather than the intermediate or "backhaul" links commonly assumed.
- The vast majority of non-auctioned licenses are issued to commercial telecommunications providers – not to Public Safety users as commonly thought.
- Non-auctioned licensing dwarfs all other allocations: *Ninety percent* of all spectrum issued by the Wireless Bureau was processed without an auction through the Commission's site-based licensing program.
- Non-auctioned licenses frequently cover multiple sites in a single license grant. Site-based licenses are not always a "single stick" (tower) as commonly believed.

Each of these points is discussed in detail below.

Site-based licenses provide final links directly to end users

The Wireless Bureau granted licenses without competitive bidding in 28 different service categories as shown in Table C. The majority of the licenses identified do not provide backhaul or backbone links, but provide commercial telecommunications service – in most cases providing a final link directly to the end user. (See line 1 of Table C). The largest category of licenses granted without auction in 2001 was mobile applications, followed by fixed microwave service. Together, these two categories represented 76% of the licenses granted without auction in 2001. This directly refutes a common

[4] NTIA Report 00-378 Spectrum Usage for the Fixed Services, Robert J. Matheson, page 86 – 88

misunderstanding that licenses granted without auction are only for incidental "backhaul"-type operations.

Public Safety services are a tiny fraction of the site-based licenses

Another common misconception is that: "only public safety users are granted licenses without auction." According to the FCC records, of the over 11,000 new licenses granted, only 524 or 4.7% were for "public safety" services. (Line 4 of Table C)

Comparing non auctioned site-based licenses to market-based licenses granted in an auction

Some might assert that non auctioned site-based licenses are not comparable to market-based licenses (which are issued via auction). Certainly, market-based license holders are relieved of the administrative burden of making numerous site-based licensing filings. However since there is *no upper limit* to the number of site-based licenses for which a company may apply, in fact, there is really no practical difference between the two approaches.

In the case of mobile services, in 2001 the Commission granted over 6,000 site-based licenses to mobile service providers in the very same spectrum bands where auctions had already been conducted.[5] Site-based licenses are often for more than one location. In microwave services, operators can establish, under a *single* site-based license, long chains of high-powered links that functionally prevent any other user from benefiting from the spectrum band in the same geographic area. Thus, licenses that are "site based," can in many cases be the functional equivalent of a "market based" license.

Nine times more spectrum was licensed without any auction through site-based licensing than was issued by auction in 2001

Northpoint's study evaluated the licenses issued through both auction and non-auction processes in order to determine how much spectrum was licensed using each of these two methods. The bandwidth of an average license was estimated and multiplied by the number of licenses issued to determine the amount of spectrum licensed. Then, a spectrum Re-use Factor[6] was employed to reflect the ability of both market-based and site-based licensees to re-use spectrum through a cellular deployment or chains of microwave links.

Capacity deployed through auction. In 2001, the Commission conducted five auctions and sold 6,743 licenses.[7] As shown in Table C, the auctioned licenses conveyed rights to use 3,176.8 MHz of spectrum capacity. Table C provides a Re-use Factor for

[5] Table C, line 1
[6] See Notes on Re-use Factor Estimates in Appendix
[7] For the purposes of this analysis the "NextWave" PCS re-auction is not considered as the outcome is uncertain.

each service and supports an overall average Re-use Factor of 7.4[8] for the spectrum auctioned, resulting in auctioned capacity of 23,000 MHz. This reuse factor accounts for instances such as the Narrowband PCS service where 1.15 MHz of capacity was available on a nationwide basis or other cases where the service would be deployed on a group of towers.

Capacity Deployed Without Auction. A similar procedure was used to calculate the MHz of spectrum capacity represented by the non-auctioned site-based licenses. Given the wide variety of licenses issued without auction through the FCC's site-based licensing scheme, it was not possible to determine the exact bandwidth for each license. Therefore, Northpoint examined the bandwidth provided for in FCC rules for each service as well as samples of licenses granted. For example, 731 of the 2,352 licenses granted for microwave services were issued in the 10.7 – 11.7 GHz band, a portion of the spectrum where 40-MHz bandwidth is typically used. To calculate the appropriate Re-Use Factor for the site-based licenses, sample licenses were reviewed and an average number was estimated for each service. As mentioned previously, the greatest amount of re-use was found in the Microwave Services, where chains of links are created from a number of segments, all of which are accounted for on a single license. The total MHz of capacity estimated through this process for all non-auctioned site-based licenses granted in 2001 was 217,984 MHz.[9]

Comparison of the two licensing methods. Over 217,000 MHz granted in the site-based licensing approach stands in dramatic contrast to the approximately 23,000 MHz allocated through an auction process. By this measure it is clear that in 2001 the Commission issued only approximately 10% of all new ground-based capacity through an auction. An estimated 90% was deployed without auction.

<u>The majority of satellite spectrum is likewise granted without any auction.</u>

An examination of the FCC's licensing practices demonstrates that auctions are the exception, not the rule, for satellites as well. The FCC's recent NPRM proposing to streamline the satellite licensing process does not even contemplate auctions for satellite applicants under Part 25 of the Commission's rules.[10] In addition, as Northpoint has stated in previous filings, many of the very companies (both satellite and terrestrial) that have urged that Northpoint be forced to participate in an auction received spectrum without participating in an auction in the last year. Specifically:

- Boeing was awarded a nationwide license to operate 800 earth stations in December of 2001 and has applications pending for two additional systems (also to be awarded without auction) that will operate on nationwide license in this

[8] Note that for each incremental reuse more than one incremental tower will be deployed as certain services are not technically capable of reusing the exact frequencies on an adjacent tower. Thus, the average 7.4 Reuse Factor would be equivalent to a network of 15 – 30 towers.
[9] See Table E
[10] NPRM and First R&O, IB Docket No. 02-34, Released : February 28, 2002

proceeding.[11]

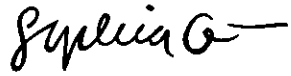
- Hughes was awarded without auction ten nationwide licenses in the Ka Band proceeding in August of 2001.[12] Hughes, the parent company of DirecTV and PanAmSat, was awarded an aggregate of ten licenses, four to Hughes and six to PanAmSat.

- Pegasus, a company that will be a direct competitor to Northpoint, was awarded without auction five licenses in the August 2001 Ka band proceeding.[13]

- AT&T and AT&T Wireless both gained licenses in 2001 through the non-auctioned site-based license approach. A query to the FCC's Universal Licensing Service database shows that companies with names beginning with "AT&T" were granted 990 non-auctioned licenses in 2001 alone. This excludes cable-related holdings of AT&T Broadband.

To sum up, in asking the Commission to issue licenses for terrestrial wireless service in the 12.2-12.7 GHz spectrum, Northpoint seeks the same treatment currently afforded the vast majority of other applicant before the Commission. No other applicant has proven itself qualified, both legally and technically, to share that band with existing and planned satellite users. Accordingly, there is no justification for subjecting Northpoint to an auction. The shibboleth that terrestrial licenses are issued by auction all or most of the time is demonstrably false and would provide no support for a decision by the Commission to single out Northpoint unfairly for auction.

Sincerely yours,



Sophia Collier
President

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[11] Order and Authorization, DA 01-3008, File No. SES-LIC-20001204-02300, December 21, 2001.
[12] Order, *Second Round Assignment of Satellite Orbit Locations to Fixed Satellite Service Space Stations in the Ka-Band*, DA 01-1693, August 3, 2001.
[13] *Id.*

Annex of supporting tables and explanatory notes.

Table A. Growth of Licenses in the Cable Relay and Private Cable Services. (Since 1993 when the Commission obtained auction authority).[14]

Thousands of licenses	18 GHz	Growth	13 GHz	Growth	Total Cable	Growth
1992 (Base period)	7		107		114	
1993	11	4	109	2	120	6
1994	21	10	126	17	147	27
1995	55	34	121	-5	176	29
1996	66	11	121	0	187	11
1997	85	19	123	2	208	21
Net new licenses (Thousands)		78		16		94

Table B. Compilation of Site-By-Site License Applications Acted Upon Reported in FCC Wireless Bureau Public Notices: January – December 2001.[15]

Type	Total
New	11,113
Renewal/Modification	4,913
Renewal	24,452
Modification	4,543
Cancellation	10,133
Withdrawal	6,226
Grand Total	61,381

[14] Source: NTIA Report 00-378, page 86.
[15] Source: Wireless Bureau Public Notices

Table C. Compilation of Site-By-Site License Applications Acted Upon Reported in FCC Wireless Bureau Public Notices: January – December 2001.[16]

Type	Licenses	%
1. SMR, 806-821/851-866 MHz, Trunked	6,082	54.7%
2. Common Carrier Fixed Point to Point Microwave	2,352	21.2%
3. Microwave Industrial/Business Pool	1,014	9.1%
4. Microwave Public Safety Pool	524	4.7%
5. Aeronautical and Fixed	335	3.0%
6. Industrial/Business Pool - Commercial, Conventional	141	1.3%
7. Aural Studio Transmitter Link	123	1.1%
8. Industrial/Business Pool - Commercial, Trunked	121	1.1%
9. Private Carrier Paging, 929-930 MHz	83	0.7%
10. TV Intercity Relay	72	0.6%
11. Broadcast Auxiliary Remote Pickup	58	0.5%
12. TV Studio Transmitter Link	42	0.4%
13. Broadcast Auxiliary Low Power	38	0.3%
14. 902-928 MHz Location Narrowband (Non-multilateration)	36	0.3%
15. SMR, 806-821/851-866 MHz, Conventional	35	0.3%
16. Coastal Group	20	0.2%
17. Cellular	11	0.1%
18. Aviation Radionavigation	5	0.0%
19. Aural Intercity Relay	4	0.0%
20. Offshore Radiotelephone	4	0.0%
21. Paging and Radiotelephone	3	0.0%
22. Aviation Auxiliary Group	2	0.0%
23. TV Pickup	2	0.0%
24. TV Translator Relay	2	0.0%
25. BETRS	1	0.0%
26. Business, 896-901/935-940 MHz, Conventional	1	0.0%
27. Industrial/Business Pool, Conventional	1	0.0%
28. Rural Radiotelephone	1	0.0%
Grand Total	11,113	100.0%

Table D. Licenses and Associated Bandwidth Conveyed FCC Auctions in 2001.[17]

Auction Description	Licenses sold	MHz	Reuse Factor[18]	Spectrum Capacity
PCS Re-auction	-	-	-	-
700 MHz Guard Band	8	30.0	3.8	114
VHF Location Monitoring	217	1,207.1	2	2,414
Paging	5,323	1,875.4	10	18,754
Narrowband PCS	317	29.2	58.6	1,711
Multiple Address System	878	35.2	10	352
Total	6,743	3,176.8	7.4	23,345

[16] Source: FCC Wireless Bureau Public Notices
[17] Source: FCC data
[18] Reuse factor is the estimated number of times each licensee would re-use the frequency in its area. Additional information is available upon request.

Table E. Estimate of Spectrum Capacity of Site-Based Licenses Reported in FCC Wireless Bureau Public Notices: January – December 2001.[19]

Type	Licenses	MHz/ License	Reuse factor[20]	Capacity
SMR, 806-821/851-866 MHz, Trunked	6,082	0.28	1	1,703
Common Carrier Fixed Point to Point Microwave	2,352	20	3	141,120
Microwave Industrial/Business Pool	1,014	20	3	60,840
Microwave Public Safety Pool	524	10	2	10,480
Aeronautical and Fixed	335	2	1	670
Industrial/Business Pool - Commercial, Conventional	141	10	1	1,410
Aural Studio Transmitter Link	123	2	1	246
Industrial/Business Pool - Commercial, Trunked	121	0.25	1	30
Private Carrier Paging, 929-930 MHz	83	0.25	1	21
TV Intercity Relay	72	6	1	432
Broadcast Auxiliary Remote Pickup	58	6	1	348
TV Studio Transmitter Link	42	6	1	252
Broadcast Auxiliary Low Power	38	6	1	228
902-928 MHz Location Narrowband (Non-multilateration)	36	0.25	1	9
SMR, 806-821/851-866 MHz, Conventional	35	0.25	1	9
Coastal Group	20	6	1	120
Cellular	11	0.5	1	6
Aviation Radionavigation	5	1	1	5
Aural Intercity Relay	4	2	1	8
Offshore Radiotelephone	4	6	1	24
Paging and Radiotelephone	3	0.25	1	1
Aviation Auxiliary Group	2	2	1	4
TV Pickup	2	2	1	4
TV Translator Relay	2	6	1	12
BETRS	1	1	1	1
Business, 896-901/935-940 MHz, Conventional	1	0.1	1	0
Industrial/Business Pool, Conventional	1	1	1	1
Rural Radiotelephone	1	1	1	1
Grand Total	11,113			217,984

[19] Source: FCC Wireless Bureau Public Notices

[20] Reuse factor is the estimated number of times the frequency is reused under a single authorization. Microwave licenses, as an example, will typically have several "segments" - each of which reuse the spectrum allocated in the license. (Estimates based on sample licenses examined.)

Notes on Reuse Factor Estimates

The reuse factor is estimated giving consideration to five primary factors: type of service (broadcast vs. non broadcast), frequency, square miles in the market area, total population and degree of population dispersion.

Frequency relates to the propagation characteristics of the portion of the spectrum used. Low frequencies such as 35 MHz can reliably propagate much further than higher frequencies, thus fewer towers can serve a larger area. As an example only 210 high powered "Channel 2" television towers are sufficient serve the entire nation.

Square miles to be covered relates to the geographic distances over which service is to be offered. The large the area to be served the more sites may be needed to it, however less populated areas are unlikely to be as reliable served as densely populated areas. This is particularly true in non broadcast services. In these types of services next two factors are crucial.

Total population is the total number of customers to be served. In broadcast applications this factor is not significant; however in point to point applications the ability to create a "cellular network" and reuse frequencies is essential to developing a market place.

Degree of population dispersion will determine the number of sites that are actually required to serve the majority of the population. In rural areas population is highly concentrated and thus large portions of the population can be covered with fewer towers. In urban areas the population is typically found is to be more evenly distributed throughout the service area necessitating a greater degree of build out.

CERTIFICATE OF SERVICE

I, Shonn Dyer, hereby certify that on this 12th day of March, 2002, copies of the foregoing were served by hand delivery* and/or first class United States mail, postage prepaid, on the following:

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