**Before the**
**Federal Communications Commission**
**Washington, D.C. 20554**

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| In the Matter of | ) | |
| | ) | |
| Former Nextel Communications, Inc. | ) | WT Docket No. 06-169 |
| Upper 700 MHz Guard Band | ) | |
| Licenses and Revisions to Part 27 of | ) | |
| the Commission's Rules | ) | |
| | ) | |
| Development of Operational | ) | WT Docket No. 96-86 |
| Technical and Spectrum | ) | |
| Requirements for Meeting Federal, | ) | |
| State and Local Public Safety | ) | |
| Communications Requirements | ) | |
| Through the Year 2010 | ) | |

## REPLY COMMENTS OF ARCADIAN NETWORKS

Arcadian Networks ("AN") hereby replies to the comments filed in response to the *Notice of Proposed Rulemaking* in the above-captioned proceeding.1/ AN offers these reply comments from the unique perspective of a current Guard Band lessee, having invested significant resources to build a growing business serving critical infrastructure customers in the Upper 700 MHz band.

AN markets mission-critical broadband wireless capabilities to public safety and first responders as well as critical infrastructure industries, including electric and other

1/ Notice of Proposed Rule Making, FCC 06-133, released September 8, 2006 ("*NPRM*" or "*Notice*"). The *NPRM* sought comment on issues affecting the A Block (746-747, 776-777 MHz) and B Block (762-764, 792-794 MHz) spectrum (the "Guard Bands") within the Upper 700 MHz band.

utilities, oil and gas, and mining companies. AN currently markets its services in 23 states, including much of the nation's heartland and border territory, as well as the Gulf of Mexico. AN currently provides service to Great River Energy, the fourth largest generation and transmission cooperative in the U.S., which manages thousands of mission-critical assets dispersed across a rural service area, throughout the majority of the state of Minnesota and in parts of Wisconsin. AN's network is now accessible to other businesses across Minnesota and parts of Wisconsin, offering the same mission-critical, secure capabilities primarily to a variety of companies with widely dispersed assets. AN also plans to expand its services to a broad range of companies in Colorado, Arkansas, California, Texas, and other states which are interested in AN's unique ability to deliver low-cost, highly secure wireless broadband communications for the specific industry challenges they face.

These reply comments focus on three issues of primary importance to AN raised in the comment round of this proceeding: (i) AN encourages the Commission to adopt rules that would provide greater flexibility for Guard Band licensees and users, with the goal of increasing viable and efficient commercial uses for the spectrum without decreasing existing protections for public safety uses in the band; (ii) AN opposes proposals to allocate returned Guard Band spectrum to separate classes of commercial critical infrastructure entities; and (iii) AN supports the Broadband Optimization Plan presented by Access Spectrum, LLC and Pegasus Communications Corporation ("Access/Pegasus").

## I. Increasing Flexibility for the Guard Bands

AN supports extending the FCC's Secondary Markets leasing rules2/ to the Guard Bands. This proposal would permit Guard Band Managers to engage in *de facto* transfer leasing and spectrum manager leasing, which have proven to be successful mechanisms for increasing the deployment of commercial services in other bands and for most other wireless services. As Guard Band Managers have noted, the Commission's record of extending the Secondary Markets leasing rules to other services is a clear indication that these rules promote efficient use of commercial spectrum.3/ Enhanced flexibility may also attract more guard band lessees interested in long-term investment in this spectrum band, with more leasing options available and greater ability to tailor arrangements to serve developing market needs. In addition to the inherent flexibility allowed by the Secondary Markets rules, the harmonization of the leasing rules among various bands will increase regulatory certainty and further encourage the deployment of commercial services in the band.

None of the commenters in this proceeding has specifically opposed the proposal to extend the FCC's general spectrum leasing rules to this band, nor has anyone suggested that public safety users in adjacent bands will be impaired. Indeed, as noted by Access/Pegasus, Guard Band licensees can provide full protection to adjacent public safety users by coordinating frequency use and the operating parameters of sites within

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2/ *See* 47 C.F.R § 1.9001 *et seq*.

3/ *See* Access Spectrum, L.L.C., Pegasus Guard Band, L.L.C., Columbia Capital Equity Partners III, L.P. and PTPMS II Communications, L.L.C., *Rule Changes to Implement the Proposed Rebanding of the Upper 700 MHz A and B Blocks for Next-Generation Wireless Broadband*, Supplemental White Paper (filed Nov. 4, 2005).

their license areas, 4/ and the current notification requirements will adequately protect public safety users.

In addition to harmonizing the Secondary Markets leasing rules to include the Guard Bands, AN encourages the Commission to adopt other measures that would create greater flexibility for Guard Band licensees. Specifically, the Commission should eliminate the limitations on band managers using the Guard Band spectrum for their own internal purposes or leasing spectrum to one or more affiliates. Consistent with the Commission's stated purpose in the *Notice* of "promot[ing] more efficient and effective use of the Guard Bands," the Commission should not penalize band managers by preventing them from using Guard Band spectrum directly while the leasing market matures. 5/ Moreover, the Commission's underlying purpose in adopting these restrictions was to "conduct a useful test of the Band Manager concept and obtain the full benefits of this new licensing approach," rather than the protection of adjacent public safety users. 6/ The limited deployment of Guard Band spectrum in the intervening years has shown that these restrictions may have served to stifle the market for Guard Band spectrum rather than to facilitate its full and efficient use, whereas the FCC's Secondary Markets rules have proven more successful without such restrictions.

The Commission should also adopt more flexible technical rules to promote the efficient deployment of broadband services over the Guard Band spectrum. AN agrees with Access/Pegasus that the current limitations on cellular architecture unnecessarily

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4/ *See* Comments of Access/Pegasus at 14 and App. 6-7.

5/ *Notice*, at ¶ 2.

6/ Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules, *Second Report and Order*, 15 FCC Rcd 5299 (2000), at ¶ 28.

inhibit the deployment of broadband services, and technical solutions exist that would protect the adjacent public safety uses without unnecessarily limiting broadband services in the bands. 7/ Specifically, AN supports the adoption of a power flux density (PFD) limit as a viable mechanism to eliminate the restriction on cellular system architecture and the liberalization of the Adjacent Channel Power and Out-of-Band Emission Limits as proposed by Access/Pegasus.

## II. Critical Infrastructure Spectrum Proposals

AN opposes proposals raised in this proceeding that would allocate the returned B Block Guard Band spectrum to certain classes of users, such as the Motorola/UTC and the Enterprise Wireless Alliance proposals. The creation of a separate class of interoperability channels is unnecessary and unwarranted. To the extent that there is a need for critical infrastructure industries to acquire additional spectrum for interoperability with public safety entities, this need can be satisfied by increasing flexibility for Guard Band licensees, as discussed above. Indeed, AN is already providing services to the critical infrastructure industry in Minnesota and parts of Wisconsin. Dedicating new spectrum to this use would unnecessarily inhibit the ability of band managers and lessees alike to use the current Guard Band spectrum for the most efficient purposes and to market the spectrum to meet the demand of the critical infrastructure industries. As in other commercial spectrum bands, the Commission should allow market forces to determine the best use of this spectrum.

Similarly, should the Commission decide to reauction the 42 returned Nextel licenses, it should not artificially limit potential bidders to the critical infrastructure

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7/ *See* Comments of Access/Pegasus at 10-11.

industry or any other specific class. The *NPRM*'s primary objective is to increase the effective and efficient use of the Guard Band spectrum, but the adoption of any new rules that would artificially limit participation in any future Guard Band auction would be contrary to that objective, and could impair full use and deployment of the bands. AN's demonstrated track record of developing, marketing, and deploying services to the critical infrastructure industry clearly demonstrates that this proposal is unnecessary.

## III. Broadband Optimization Plan

AN supports the comments and Broadband Optimization Plan proposed by Access/Pegasus. AN believes that the plan would benefit both public safety and commercial users, and AN encourages the Commission to adopt the plan – particularly the relaxation of Guard Band restrictions. In addition, AN agrees with Access/Pegasus that increasing the A Block licenses from 1 MHz paired to 1.5 MHz paired would allow licensees to provide a wider range of services (including next-generation wireless broadband services) while still protecting the public safety portions of the Upper 700 MHz band. 8/

AN also agrees with Access/Pegasus that the Commission should encourage the development of partnerships between public safety entities and adjacent 700 MHz licensees for the deployment of mixed-use, public safety-priority networks. 9/ By increasing the spectrum available for A Block licensees, in particular, these partnerships would facilitate the most efficient use of the 700 MHz spectrum without jeopardizing the Commission's public safety objectives.

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8/ *See* Comments of Access/Pegasus at App. 7.

9/ *See id.*, at 6-7.

## Conclusion

In summary, AN urges the Commission to grant the much needed flexibility proposed for Guard Band licensees and users in this proceeding, and to adopt the Broadband Optimization Plan. In particular, the Commission should consider the perspective of current Guard Band lessees, such as AN, who have invested significant resources in developing businesses and customers in the bands, and who would greatly benefit from additional flexibility.

Respectfully submitted,

**ARCADIAN NETWORKS**

*/s/ Michele C. Farquhar*

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Dated: November 13, 2006