

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

In the Matter of)	
)	
Service Rules for the 698-746, 747-762 and 777-792 MHz Bands)	WT Docket No. 06-150
)	
Former Nextel Communications, Inc. Upper 700 MHz Guard Band Licenses and Revisions to Part 27 of the Commission’s Rules)	WT Docket No. 06-169
)	
Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band)	PS Docket No. 06-229
)	
Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010)	WT Docket No. 96-86
)	

REPLY COMMENTS OF ARCADIAN NETWORKS

Arcadian Networks (“AN”) hereby replies to the comments filed in response to the Commission’s *Further Notice of Proposed Rulemaking* in the above-captioned proceeding. ^{1/} AN offers these reply comments from the unique perspective of a current 700 MHz guard band lessee that has invested significant resources to serve public safety users and critical infrastructure industries (“CII”). AN applauds the Commission for its recent changes to the guard band rules, which will facilitate increased use of the guard bands and encourage the deployment of broadband services. The Commission should continue its policy of providing

^{1/} See Report and Order and Further Notice of Proposed Rulemaking, FCC 07-72 (rel. Apr. 27, 2007) (“700 MHz Report and Order” and “Further Notice”).

flexibility to wireless service providers, and should deny the inflexible and impractical Frontline Wireless, LLC (“Frontline”) proposal. It should also embrace band plan Proposal 3 because it provides a solution to the international border and funding concerns raised by public safety in this proceeding and also has broad support from commercial interests. ^{2/} As part of the guard band transition under this plan, the Commission should ensure that: (1) any additional equipment certifications needed are granted on an expedited basis; (2) ample time is provided after the equipment certification process is complete for guard band licensees to transition to the new frequencies; and (3) it does nothing during this time period to disrupt the transition process for existing customers and lessees.

Background Regarding AN. AN markets mission-critical broadband wireless capabilities to public safety and first responders as well as CII, including electric and other utilities, and oil, 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 a majority of the state of Minnesota and in parts of Wisconsin. AN’s network is now accessible to public safety agencies and 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, companies that are interested in AN’s unique ability to deliver low-cost, highly secure wireless broadband communications for the specific industry challenges they face.

^{2/} See Further Notice ¶¶ 195-99.

Recent Guard Band Rule Changes. AN applauds the Commission for its decision in the *700 MHz Report and Order* to remove some of the restrictions that had caused the guard band spectrum to remain significantly underutilized in most areas. ^{3/} The Commission's application of its successful Secondary Markets leasing rules to these bands will undoubtedly lead to more efficient use of the spectrum as the availability of additional leasing options will attract new guard band lessees. In addition, this change is consistent with the Commission's goal of promoting regulatory parity among the various wireless services.

Equally important, the Commission is to be commended for removing the anachronistic restrictions on the guard band spectrum, including rules that prevented a guard band manager from providing service itself, from leasing more than 49% of its spectrum to an affiliate, and from mandating the use of particular technologies. ^{4/} Liberated from the burden of these unnecessary restrictions, guard band manager licensees and lessees such as AN will have greater flexibility to tailor services and arrangements that respond to developing market needs, which will result in less spectrum lying fallow. Moreover, the Commission has paved the way for more efficient spectrum use while improving the interference conditions for the public safety users in adjacent bands. The Commission should build on this success and encourage public-private partnerships by adopting band plan Proposal 3 and harmonizing the technical rules that govern the new A Block to that of the existing commercial C and D Blocks.

Frontline Proposal. The *Further Notice* sought comment on Frontline's proposal to create a 10 MHz E Block in the Upper 700 MHz band that would be used for a nationwide, interoperable broadband network and shared with public safety users. ^{5/} Many entities filed

^{3/} See *700 MHz Report and Order* ¶¶ 151 *et seq.*

^{4/} *Id.*

^{5/} See *Further Notice* ¶¶ 168 *et seq.* (summarizing key aspects of the proposal); *see also, e.g.*, Comments of Frontline Wireless, LLC, PS Docket No. 06-229 (filed Feb. 26, 2007); Reply Comments of Frontline Wireless, LLC,

comments on the Frontline Proposal, and the majority of commenters either opposed the proposal or offered only conditional support. AN agrees with these commenters and requests that the Commission reject the Frontline proposal because it is extremely risky, impractical, and unnecessary.

Frontline’s proposal is extremely risky as a business model and for public safety users.

The Frontline proposal imposes a specific nationwide shared network business model on the E Block licensee that would likely restrict severely the number of bidders for the license for multiple reasons. Very few entities have access to the funds required to construct a nationwide broadband network within ten years, as contemplated by the Frontline proposal. In fact, many commenters have stated their preference for licenses with small geographic areas (*i.e.*, EAs or CMAs). ^{6/} In addition, potential bidders are likely to be deterred by the “poison pill” restrictions that would attach to the E Block under Frontline’s proposal. ^{7/} For example, the proposal mandates a wholesale-only, open-access commercial venture, ^{8/} and would also require the E Block licensee to provide automatic roaming (on all of its spectrum holdings) and subject itself to *Carterfone*-style requirements. ^{9/} Numerous commenters in this proceeding oppose these

PS Docket No. 06-229 (filed Mar. 12, 2007); Comments of Frontline Wireless, LLC, WT Docket No. 06-150 (filed Mar. 6, 2007).

^{6/} See, *e.g.*, Comments of SpectrumCo LLC at 12-14 (filed May 23, 2007); Comments of Alltel Corporation at 3-4 (filed May 23, 2007) (“Alltel Comments”); Comments of MetroPCS Communications, Inc. at 13-19 (filed May 23, 2007) (“MetroPCS Comments”); Comments of the National Association of Telecommunications Officers and Advisors, *et al.* at 5-6 (filed May 23, 2007); Comments of the Small Business Administration, Office of Advocacy at 9 (filed May 23, 2007); Comments of Frontier Communications at 6-9 (filed May 23, 2007); Comments of McBride Spectrum Partners, LLC at 8-9 (filed May 23, 2007).

^{7/} See Alltel Comments at 4-6 (stating that the restrictions “would make the proposed E Block unattractive to so many potential bidders that it would likely reduce the number of serious contenders for the spectrum (as well as the price of this 700 MHz block) . . . [and] could result in a below-market price for the E Block spectrum, effectively giving it away without any concomitant guarantee of performance of the licensee’s promises”); MetroPCS Comments at 50-53 (stating that “Frontline is attempting to have this 10 MHz of E Block spectrum earmarked to itself so that it can purchase 10 MHz of spectrum with little if any competition at a greatly reduced price”); Comments of CTIA – The Wireless Association® at 18 (filed May 23, 2007) (“CTIA Comments”).

^{8/} See *Further Notice* ¶ 275.

^{9/} *Id.*

service restrictions. [10/](#) Furthermore, no existing providers offer a wholesale service with automatic roaming and *Carterfone* benefits, suggesting that such a service may not be financially viable. [11/](#) Consequently, public safety users are likely to end up being stuck with a start-up entity that has limited access to capital, no clear expertise in building and operating networks, and very little to lose if the business model fails. The Commission should not conduct an experiment with the valuable E Block spectrum, particularly if our nation’s first responders are going to be relying on it.

The Frontline proposal also forces the public safety community to rely on the E Block licensee for its broadband connectivity but leaves many important enforcement questions unanswered. For example, Frontline has failed to articulate how public safety users will be protected against a bankruptcy or other financial default by the E Block licensee. Similarly, public safety users would be stranded if the E Block licensee failed to meet its construction benchmarks. Moreover, commenters have noted additional practical enforcement limitations against the E Block licensee. [12/](#) The Commission may not wish to fine the licensee because the money could be spent deploying the nationwide network or the fine would threaten the viability

[10/](#) See, e.g., Alltel Comments at 4-6; Comments of AT&T Inc. at 8-11 (filed May 23, 2007) (“AT&T Comments”); MetroPCS Comments at 49-82; CTIA Comments at 17-19. By reducing the number of bidders, the service restrictions may also lead to lower auction revenues for the E Block and jeopardize the auction proceeds. See CTIA Comments at 21-22; see also *Ex Parte* Submission of Furchtgott-Roth Economic Enterprises in PS Docket No. 06-229 at 31-32 (filed Apr. 5, 2007) (“Furchtgott-Roth *Ex Parte*”) (stating that “designating even a small part” of the commercial 700 MHz spectrum for non-commercial purposes “could substantially reduce commercial interest in the band of spectrum and reduce potential receipts from auction participants” and could have a “detrimental effect” on commercial spectrum values in other bands).

[11/](#) See, e.g., Letter from Steve Largent, President and CEO, CTIA – The Wireless Association® to Kevin Martin, Chairman, Federal Communications Commission, WT Docket No. 06-150, at 4-5 (filed Apr. 5, 2007) (“Largent Letter”) (stating that “[t]he combination of conditions proposed by Frontline render the prospects for business success so unlikely as to not only de-value the spectrum but also reduce the likelihood the public will ever enjoy any of the promised public interest benefits”).

[12/](#) See, e.g., Comments of Union Telephone Company at 16 (filed May 23, 2007) (“Union Telephone Comments”); MetroPCS Comments at 65 (stating that, under the Frontline proposal, “the Commission would have to wait four years before it could automatically cancel the E Block licensee’s license”).

of the licensee. [13/](#) The Commission may be hesitant to reclaim any of the E Block spectrum if doing so would delay the deployment of nationwide services to public safety. [14/](#) These are just a few of the serious deficiencies in the Frontline proposal.

The Frontline proposal is impractical and fatally flawed in its current form, and cannot be salvaged in time to keep the 700 MHz auction on schedule. AN disagrees with commenters that seek to “patch up” the Frontline proposal with many new conditions. Instead, the Commission should reject the proposal, keep the auction on schedule, and allow market forces to determine the highest and best use of the E Block spectrum.

The Commission is required to begin the 700 MHz auction by January 28, 2008, and finding adequate responses to the many remaining unanswered questions in Frontline’s proposal would surely risk delaying the auction. [15/](#) For example, what happens if the E Block licensee cannot secure financing to construct a nationwide network? What happens if public safety users cannot successfully create a nationwide E Block representative? What happens if public safety and the E Block licensee cannot agree on the terms and conditions of the network? These and many more questions must be answered before potential bidders can be informed fully about providing service via the E Block.

Even if the Commission eliminated the burdensome service requirements proposed by Frontline, the Frontline proposal would still involve a risky experiment with public safety’s future. Moreover, because the E Block licensee would remain a monopoly service provider – with public safety users having very little negotiating leverage – the Commission would likely

[13/](#) Union Telephone Comments at 16.

[14/](#) *Id.*

[15/](#) See, e.g., Largent Letter at 1-2 (stating that “the Commission is being asked in an unrealistic timeframe to review a very intricate proposal” and expressing concerns over “the legality of the proposal; Frontline’s desire to have the Commission revert back to ‘command and control’ assignment of spectrum; questions about Frontline’s business model and whether it has any chance for success; questions regarding needed and continuous Commission oversight over such a proposal; . . . and other significant issues . . . ”); Furchtgott-Roth *Ex Parte* at 32 (noting that “scheduled auctions should not be adversely affected” by public safety spectrum proposals).

need to provide significant oversight for many years to ensure that the E Block licensee acted not only in accordance with the specific E Block requirements, but consistent with the Commission's public safety goals generally. In short, public safety users will lose their independence in this environment, and their future communications abilities would be utterly dependent on a single, commercial entity with very little incentive to meet public safety's ongoing requirements.

The Frontline proposal is also completely unnecessary. The Commission does not need to dictate a specific business model for the E Block, nor does it need to impose the myriad irrelevant service restrictions proposed by Frontline if it wants to facilitate a nationwide, interoperable broadband network for public safety users. The Commission should instead let market forces work to provide infrastructure or service to the public safety community.

The Commission should avoid limiting the business models available to licensees, even in the context of providing service to public safety users. The Commission has for years endeavored to eliminate command-and-control-style regulation for wireless services in favor of market-based solutions, and should not reverse course for the 700 MHz auction. [16/](#) Allowing open competition for the privilege of offering services to the public safety community is critical. Doing so will allow Public Safety to retain control of its operations and infrastructure because it will be able to choose from among competing companies and discharge operators that fail to meet their commitments—without having to untangle thorny regulatory arrangements. In fact, service providers are already working diligently to meet public safety's needs. AN, for example, is actively pursuing opportunities with public safety users, including CII and first responders, in twenty-three states. It competes with other providers to offer customized, reliable, highly secure

[16/](#) The Commission continued this policy in the *Further Notice* itself by removing certain restrictions (including the guard band manager regime) that previously limited the service options of guard band licensees. See *700 MHz Report and Order* ¶¶ 151 *et seq.*

services to these users. [17/](#) Other entities interested in serving the public safety community or CII have different business models, some of which may be to provide responsive local or regional services or to combine public safety offerings with separate, retail commercial services. Thus, even if it determines that public safety should have a nationwide, interoperable broadband network, the Commission should avoid trying to predict the specific business model that will be most viable or valuable to public safety. [18/](#) Instead, the Commission should permit the public safety community to take advantage of the leverage afforded by its 3 million users (as well as the rights to use its substantial broadband allocation on whatever terms it decides) and secure from service providers, system integrators, telecom equipment manufacturers and start-up entities in the competitive marketplace those services that are most responsive to public safety's needs.

Finally, Frontline can implement its business model under the Commission's current service rules. Frontline can bid on as much spectrum as it needs in the 700 MHz auction and offer any combination of wholesale-only, open-access, automatic roaming features, consistent with the Commission's rules. [19/](#) It can also negotiate with public safety users (or a single public safety licensee, if the Commission designates one) to develop a nationwide, interoperable broadband network. Frontline has failed to show why its proposed service restrictions and business model are crucial to (or even related to) the Commission's public safety goals; given

[17/](#) Now that the Commission has granted additional flexibility to guard band licensees, AN can offer a wider range of services. In addition, the Commission's adoption of the Secondary Markets regime for the guard bands will similarly facilitate their full and efficient use. *See id.*

[18/](#) Some parties have argued in this proceeding that sufficient spectrum has already been allocated to public safety for an interoperable broadband network. *See, e.g.,* AT&T Comments at 9; Reply Comments of CTIA – The Wireless Association® in PS Docket No. 06-229 at 2-7 (filed Mar. 12, 2007); Comments of Metro PCS in PS Docket No. 06-229 at 3 (filed Feb. 26, 2007). In any case, it is not possible to regulate a business model that does not make financial sense. To do so is a recipe for disaster.

[19/](#) Under the Commission's rules, Frontline would also be able to cease offering those features if they threatened the company's financial viability, an option that is not allowed under the Frontline proposal itself.

that existing providers can serve public safety users without such onerous or comprehensive restrictions, it likely cannot make such a showing.

Band Plan Proposal 3 and Needed Safeguards. Proposal 3 (the Access Spectrum/Pegasus Alternative Proposal) [20/](#) solves the international border, interference, and public safety funding concerns raised in this proceeding, and a broad array of industry commenters have already expressed their support. [21/](#) AN also supports Proposal 3 and recommends that the Commission adopt it with the conditions set forth by Access Spectrum/Pegasus. [22/](#) Specifically, the Commission should harmonize the technical rules of the new A Block to those of the existing commercial C and D Blocks and remove the cellular architecture prohibition on the new A Block. In addition, the Commission should grant MHz-pop auction discount vouchers to the Upper 700 MHz guard band licensees that are turning in B Block spectrum to facilitate the adoption of Proposal 3, as proposed by Access Spectrum and other guard band licensees. [23/](#)

Most importantly, the Commission should protect existing guard band licensees, lessees, and their customers through the adoption of several safeguards. First, the Commission should ensure that any additional equipment certifications needed for guard band licensees to complete the transition to the new A Block are granted on an expedited basis. Second, after the equipment certification process is complete, the Commission should provide ample time for guard band licensees to transition to the new frequencies. [24/](#) Finally, the Commission should also ensure

[20/](#) See *Further Notice* ¶¶ 195-99.

[21/](#) See, e.g., Comments of Verizon Wireless at 16-19 (filed May 23, 2007); Comments of the Coalition for 4G in America at 3 (filed May 23, 2007); Comments of Motorola, Inc. at 13-14 (filed May 23, 2007) (supporting Proposal 3 and derivative proposals); Comments of the Wireless Communications Association International, Inc. at 5-6 (filed May 23, 2007) (supporting a band plan consistent with Proposal 3 and derivative proposals).

[22/](#) See *Further Notice* ¶ 197.

[23/](#) See Comments of Access Spectrum, LLC, *et al.* at 10-11, 13-15 (filed May 23, 2007).

[24/](#) Assuming equipment authorizations happen in a timely manner, AN anticipates that the transition can be conducted in a timely fashion without any burden on the new commercial licensees.

that any transition period or other rule changes that it adopts allow guard band licensees to complete the transition without disrupting existing guard band lessees or customers (many of which are public safety and CII users).

In summary, AN applauds the Commission's efforts to grant much-needed flexibility to guard band licensees. In the same spirit of promoting a diverse array of business plans, AN encourages the Commission to reject the restrictive, impractical, and unnecessary Frontline proposal. Furthermore, the Commission should adopt band plan Proposal 3 and the conditions set forth by Access Spectrum/Pegasus, including MHz-pop auction discount vouchers for current B Block licensees. It should also ensure a smooth transition for the guard band licensees and lessees, with expedited equipment certification and an ample transition period that will not disrupt existing guard band users or customers.

Respectfully submitted,

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