

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)
)
Service Rules for the 698-746,)
747-762 and 777-792 MHz Bands) WT Docket No. 06-150
)
)

COMMENTS OF FRONTLINE WIRELESS, LLC

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INTRODUCTION AND SUMMARY

Frontline Wireless, LLC (“Frontline”)¹ recently presented the Commission with its Public Safety Broadband Deployment Plan (“Plan”) — a plan that enables the construction of a nationwide, interoperable broadband network for the public safety community at the willing expense of a neighboring national commercial licensee, consistent with the Commission’s current authority and without delay of the 700 MHz auction.² Frontline’s Plan would achieve the laudable aspirations laid out by the Commission by meeting the following five key communications needs of our nation’s public safety community:

- (1) *Free build-out* of a nationwide public safety broadband network;
- (2) *Increased spectrum* through priority access to commercial 700 MHz spectrum in an emergency;
- (3) *Local control* over public safety networks;
- (4) *Maximum equipment choice* with the use of open network standards;

¹ Based in Greensboro, N.C. and with offices in Washington, D.C., Frontline is organized for the purpose of building a nationwide public safety broadband network and is committed to providing innovative solutions for public safety and commercial users alike.

² See Comments of Frontline Wireless, LLC, *Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band*, Docket No. 06-229 (Feb. 26, 2007).

- (5) *Nationwide interoperability* among all broadband networks with security and authorization controlled at national, regional, and local levels.

These comments propose specific service rules to implement Frontline’s Plan.³

They can be implemented easily and quickly, and they apply to only a fraction of the 700 MHz commercial spectrum (i.e., two paired 5 MHz blocks). Further, Frontline’s proposed service rules, which are needed to carry out the allocation decisions recommended in the public safety proceeding, do not impose burdensome regulatory requirements, but instead facilitate and incent market-based solutions that can be implemented with little or no Commission intervention or ongoing supervision.

Like the Plan itself, Frontline’s proposed service rules will provide critical benefits to our public safety agencies by ensuring that they can rely on a modern, reliable, robust, secure and interoperable network supporting full mobility for their emergency communications. The proposed rules would require the winning bidder of the two 5 MHz blocks, the “E Block licensee,” to operate an open access network. Open access operations will optimize the benefits provided to the public safety community under Frontline’s Plan and will deliver other public interest benefits in connection with the commercial services supported by the E Block licensee. These benefits would extend to American consumers and, in particular, to rural communities (including rural health care providers,⁴ first responders, and critical infrastructure operators) and

³ Frontline’s Plan is a recent and innovative collaboration that responds to, and improves upon, the Commission’s vision for public safety as set forth in its Ninth Notice of Proposed Rulemaking in Docket No. 06-229. Because the service rules to be adopted in this proceeding will need to implement the decisions reached in that proceeding, no delay should result from the fact that Frontline is filing these comments after the original filing dates in this proceeding. Frontline vigorously supports a timely auction of the 700 MHz spectrum.

⁴ The Commission has recently, and correctly, focused on the needs of rural health care providers. *See, e.g., Assessing the Communications Marketplace: A View from the FCC: Hearing Before the Senate Comm. on Commerce, Sci. and Transp.*, 110th Cong. (2007) (continued...)

would include: a high-quality, high-performance broadband network available to over 99% of Americans; an open network that supports open device interconnections; and nationwide roaming for other wireless networks and carriers, including rural carriers. The rules would also provide enhanced access, innovation, and competition in broadband wireless services.

The Commission should seize this historic opportunity to use the commercial 700 MHz spectrum to comprehensively address the critical communications needs of the public safety community and provide for other innovative services.

I. THE COMMISSION SHOULD ADOPT THE PUBLIC SAFETY BROADBAND PLAN.

A. The Commission Should Ensure the Development of a National Broadband Public Safety Network.

There is a wide national consensus that the communications networks currently used by our dedicated public safety agencies and officials are inadequate for their needs. The Commission has shown a strong commitment to solving these potentially life-threatening communications problems by recognizing in a parallel proceeding the need for the construction of a national wireless broadband network for our nation’s public safety community.⁵ Frontline shares the Commission’s vision and believes that it can be fulfilled only by addressing the

(statement of Kevin Martin, Chairman, Federal Communications Commission, at 7). (“The Commission will also do its part to ensure that all Americans, including those who live in the most remote areas of the country, receive first-rate medical care. We recently took action, through our adoption of a Rural Healthcare Pilot Program, to support the construction of state and regional networks dedicated to health care. . . . The deployment of such a network will create numerous opportunities for delivering telehealth services, including telemedicine applications that have the potential to revolutionize the current healthcare system throughout the nation.”).

⁵ *Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band; Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010*, Ninth Notice of Proposed Rulemaking, 21 FCC Rcd 14837 (2006) (“*Ninth NPRM*”).

chronic communications problems that our public safety officials face. These problems include the following:

- **Insufficient Funding.** Public safety must have a viable means of financing the large, up-front, fixed costs of constructing a national public safety broadband network, estimated at \$8 billion or more. Without further Commission action, public safety has no practical means of funding the construction of a network that meets its needs.
- **Insufficient Spectrum.** Public safety agencies must have access to sufficient spectrum during times of emergency; access to only 12 MHz will not suffice.
- **Lack of Local Control.** Public safety agencies and officials require total “unit level” command and control over any public safety broadband network.
- **Lack of Equipment Choice and Open Access.** Public safety agencies should have maximum freedom in choosing affordable equipment that meets their individual needs. Further, it is critical that the public safety broadband network be interoperable, thus facilitating communications among local, state, and national agencies in times of emergency.
- **Lack of Interoperability.** Public safety agencies need the ability to conduct interagency communications with appropriate local control in times of emergencies.⁶

B. Frontline’s Proposed Public Safety Broadband Deployment Plan Enables the Construction of a National Public Safety Broadband Network.

Frontline’s Plan addresses these concerns by enabling the construction — at no cost to taxpayers or to public safety agencies — of a nationwide infrastructure that would support a 4G, interoperable, and secure public safety broadband network. Given that it will be decades, if ever, before such a large amount of highly efficient spectrum becomes available again, the Commission should take advantage of this opportunity to provide our first responders and public safety officials with the communications tools they need and deserve.

⁶ See, e.g., *Independent Panel Reviewing the Impact of Hurricane Katrina on Communications Networks*, Report and Recommendations to the Federal Communications Commission, at 26 (2006) (“[I]ncreased ability to interoperate with other agencies would have provided greater redundant communications paths and a more coordinated response.”).

Frontline’s Plan provides a solution to the public safety community’s communications problems that is market-based, that can be implemented without any delay to the 700 MHz auction, and that is self-enforcing. As described in greater detail in the following sections, Frontline proposes that the Commission license one paired 2 x 5 MHz block of 700 MHz commercial spectrum subject to the condition that the commercial licensee build a nationwide infrastructure that would support the public safety broadband network. The licensee would also grant public safety priority access to its commercial spectrum during emergencies.

In addition, the holder of the E Block spectrum must offer network service to any and all retail service providers. It must offer service to all device makers that interface with published standards. It must, to the degree technically feasible, accommodate all methods of connection to the network. By making itself open to all such users, the E Block holder would act as a wholesale service provider.⁷

The public safety users would benefit from the application of these open access requirements because they would assure that the E Block spectrum holder would be open to any choice of equipment by the public safety user.⁸ Indeed, even individual public safety users in the same community — just like individual device users or different retail service providers — could

⁷ Since the purpose of the E Block allocation is to provide open access to all retail service providers and since the Commission will want to encourage Designated Entity participation in the E Block auction, it should make clear that Section 1.2110(b)(iv)(A) of its Designated Entity rules will not apply to the E Block auction. Indeed, Section 1.2110(b)(iv)(A) suggests that this issue can be addressed under “applicable service-specific rules.” Otherwise, the unintended result would be to make it impossible for any Designated Entity to obtain bidding credits for the E Block license — clearly a result that the Commission would not intend. However, the other Designated Entity rules would apply.

⁸ Because the commercial licensee’s network must meet the public safety community’s requirements for coverage, robustness and reliability, it would also provide the greater public — including other first responders, health care providers, and critical infrastructure providers in both rural and non-rural America — with the same benefits of an open, interoperable, and secure 4G network.

choose from a range of communications equipment knowing that all could connect to the E Block network. This last requirement would also respond to the call for “wireless *Carterfone*” rules and would apply them to a small but important slice of spectrum.⁹ Further, an E Block licensee that used the spectrum to implement its own retail-service business would design and operate the network for that purpose. In contrast, a licensee required by rule to operate an open access network would create new opportunities for the launch of all kinds of breakthrough services, excluding none.¹⁰

II. FRONTLINE’S PROPOSED SERVICE RULES FOR THE COMMERCIAL 700 MHZ SPECTRUM PROMOTE THE NEEDS OF PUBLIC SAFETY AND OTHER PUBLIC INTEREST OBJECTIVES.

A. Frontline’s Proposed Service Rules Designate 10 MHz of the 700 MHz Commercial Spectrum.

1. Size of Spectrum Blocks

The Notice of Proposed Rulemaking in this proceeding (“*NPRM*”) asks whether the Commission should “divid[e] the 20-megahertz Block D license in the Upper 700 MHz Band into two or more license blocks.”¹¹ The answer is, emphatically, “Yes.” Dividing this license block is a critical first step in enabling the construction of a nationwide public safety broadband network at no expense to taxpayers.

⁹ See, e.g., Skype Communications S.A.R.L., Petition to Confirm a Consumer’s Right to Use Internet Communications Software and Attach Devices to Wireless Networks (filed Feb. 20, 2007).

¹⁰ This role for the E Block licensee serves many public policy objectives and is consistent with all other Commission rules. By making its network available to all retail service providers, the E Block licensee would not be leasing its spectrum and, therefore, would not be subject to the Commission’s rule against leasing more than 50% of its spectrum. The E Block licensee would, instead, be selling minutes on its network to retail service providers.

¹¹ *Service Rules for the 698-746, 747-762 and 777-792 MHz Bands*, Notice of Proposed Rulemaking, Fourth Further Notice of Proposed Rulemaking, and Second Further Notice of Proposed Rulemaking, Docket No. 06-150, ¶49 (2006).

Specifically, Frontline urges the Commission to divide in half the current commercial D Block allocation, thereby creating a paired 5 MHz “E Block.” The result would be three 10 MHz commercial blocks (each with a 2 x 5 MHz configuration) in the Upper 700 MHz band: the current C Block, an equal-sized D Block, and a new, equal-sized E Block. Dividing the larger block in this manner is an easily-implemented measure, well within the Commission’s authority, that would not delay the auction by a day. Further, several parties in this proceeding have already proposed dividing this license block in response to the *NPRM*, which expressly contemplated such a division.¹²

2. *License Conditions for E Block*

To achieve the objective of creating a public-private partnership, the E Block licensee would be subject to requirements designed to promote and facilitate efficient, market-based relationships, which can be easily implemented and are self-enforcing. Specifically, the E Block licensee shall: (1) construct and manage a nationwide infrastructure on public safety’s allocated frequencies to support an interoperable, wireless broadband network that meets public safety needs on national, regional, and local levels; (2) commit to operate the network to standards of network performance and reliability determined in consultation with the neighboring public safety licensee; (3) provide public safety with priority access to the E Block commercial spectrum during emergencies; (4) provide control capabilities for local and state public safety agencies to have logical control over their own public safety networks that use this public safety spectrum; (5) deploy its commercial broadband network based on open access principles; and (6) enable roaming in support of small and rural carriers.

¹² *Id.*

B. Frontline’s Proposed Service Rules Provide for Construction of a Public Safety Broadband Network Without Cost to the Public Safety Community.

1. *Build-Out of Broadband Facilities*

The E Block licensee would be required to fund the construction of a common network infrastructure that would support, and be used by, both the public safety broadband network and the E Block licensee’s commercial network. The Plan would maintain for public safety its already-allocated 12 MHz of spectrum, and would provide access on negotiated terms to an additional 10 MHz on the commercial E Block during emergencies and on a priority basis.¹³ The facilities will use modern, IP-based system architecture to ensure and promote flexibility, local control, and technological innovation. The facilities to be constructed by the E Block licensee would include all necessary antennas, transmitters, tower sites (leased or owned), routers and switching centers, control layers, and backhaul facilities for a wireless access network that connects to one or more core IP network backbone providers.

Requiring the E Block licensee to construct a common network provides numerous benefits to the public safety community. Most obviously, public safety — and taxpayers — would be relieved of the formidable construction costs that a diverse array of local and state public safety agencies simply cannot bear. Further, public safety would be free to focus on its core responsibilities, thereby avoiding the time-consuming and burdensome tasks of securing capital investment for network buildout. A common infrastructure would generate

¹³ An additional 3 MHz (paired 1.5 MHz blocks) of the former A and B Block Guard Band spectrum would be made available for commercial broadband services if the Commission adopts the Broadband Optimization Plan, which Frontline supports. *See, e.g.*, Comments of Access Spectrum, LLC, Columbia Capital III, LLC, Intel Corporation and Pegasus Communications Corporation, WT Docket No. 96-86 (June 6, 2006). This spectrum would be situated between the E Block and the public safety broadband block. There may be other similar proposals that meet the Commission’s public safety objectives to which Frontline will give serious consideration.

significant cost savings in both the construction and operation of the network, and would promote economies of scale. A single national wireless broadband infrastructure, built and operated by the E block licensee, would also provide a fully effective solution to the vexing challenge of interoperability.

In addition to constructing the network, the E Block licensee would be responsible for managing the common network. Vesting network management responsibility with the commercial E Block licensee would, along with the common infrastructure, promote interoperability and ensure consistent service and technological quality across the network. The E Block licensee would be permitted to collect a negotiated reasonable network fee from public safety agencies using the network, to cover the costs that are attributable to public safety's use of the network infrastructure.

2. *Construction Requirements/Benchmarks*

To ensure prompt and comprehensive construction of the public safety broadband network, the E Block licensee would be required to satisfy the following build-out benchmarks. These benchmarks would achieve public safety broadband network coverage of over 99% of the nation's population within ten years of the 700 MHz auction clearing date:¹⁴

- Provide 25% geographic coverage of the continental United States within four years of license grant;
- Provide 50% geographic coverage of the continental United States within seven years of license grant; and
- Provide 75% geographic coverage of the continental United States as requested by local public safety agencies within ten years of license grant.

¹⁴ The auction clearance date is an appropriate starting date for the construction deadlines because it reflects market realities and gives the winning bidder a realistic timeframe to meet its obligations.

In addition, the E Block licensee must provide “substantial service,” which is defined in 47 C.F.R. § 27.14(a) as “service which is sound, favorable, and substantially above a level of mediocre service which just might minimally warrant renewal.”

3. *Operating Requirements*

One of the most important priorities of a national public safety broadband network is that it remain operable — and interoperable — during an emergency. To that end, the network constructed by the E Block licensee would operate as a wireless broadband IP-based network. Its commercial operation would be subject to the same survivability, throughput, security, and interoperability requirements specified by the public safety broadband rules. For public safety operations, additional requirements could be specified in the network sharing agreement between the E Block licensee and the public safety broadband licensee. In addition, through the open IP infrastructure, the benefits of modern applications would be extended from large metropolitan areas to rural America.

The E Block licensee’s infrastructure should enable local, regional, and national public safety agencies to have total local command and control over their individual logical transport networks. Specifically, the technology and the network’s operation must allow these agencies to create virtual private networks or Intranets that would be controlled by the individual public safety agencies to ensure their security. The network operator would provide and enable authentication, authorization, and accounting functionality (AAA) similarly to the Internet standards currently used in highly reliable enterprise and military networks.

4. *Renewal Requirements*

In applying for license renewal, the E Block licensee must satisfy the requirements of 47 C.F.R. § 27.14(b). Specifically, the licensee must provide “substantial

service” (defined above) and must substantially comply with applicable laws and Commission rules. If the licensee satisfies these requirements, it will enjoy an expectation of renewal.

C. Frontline’s Proposed Service Rules Increase the Spectrum Available to Public Safety In Times of Emergency.

1. *Priority Access*

A common and powerful concern raised in the Commission’s *Ninth Notice of Proposed Rulemaking* in the parallel public safety proceeding is that 12 MHz is an insufficient amount of spectrum for the demands a national public safety broadband network would face in an emergency.¹⁵ Frontline’s Plan provides a market-based solution to this serious problem by nearly doubling during an emergency the amount of spectrum available to public safety.¹⁶

Access to this additional spectrum will ensure that public safety can meet emergency demands.

To implement these important benefits, the E Block licensee would be required to provide priority access on its own 10 MHz of spectrum to public safety broadband operations during times of emergency. This can be readily accomplished by giving priority treatment to public safety traffic moving through the IP network. The procedures, protocols, and fees for such use would be defined in an agreement between the E Block licensee and the national public safety licensee. These arrangements would improve substantially on the current rules governing Priority Wireless Service in the CMRS context because, under Frontline’s proposed

¹⁵ See, e.g., Comments of APCO, *Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band*, Docket No. 06-229, at 4 (Feb. 26, 2007); Comments of GEOCommand, Inc. *Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band*, Docket No. 06-229, at 10-14 (Feb. 26, 2007); Comments of State of California, *Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band*, Docket No. 06-229, at 2 (Feb. 26, 2007).

¹⁶ As noted *supra* at n. 13, even more spectrum would be available if the Commission adopted the Broadband Optimization Plan.

requirements, the public safety broadband traffic could immediately, and without any perceptible delay, obtain priority routing over commercial traffic during an emergency. In an IP network, this reprioritization can occur instantly. Importantly, unlike in the CMRS context, preemption on the E Block network would not be optional – it would be a condition of license for the E Block operator.

2. *Public Safety Network Sharing*

Although under Frontline’s Plan the network sharing agreement is subject to negotiation and thus would not unduly restrict the freedom of the public safety community, both parties have substantial incentives to reach such an agreement. The public safety community will want access to the additional 10 MHz for emergency use. The nature of its architecture and the nature of its operations, as described above, will be highly attractive for public safety use. The E Block licensee will want to gain secondary access to public safety’s excess capacity in its 12 MHz of spectrum. As a result, the E Block licensee and the public safety broadband licensee should be able promptly to reach an appropriate network sharing agreement.

The following requirements would apply to this sharing agreement. These requirements establish the ground rules necessary to create market-based incentives for both parties to reach a mutually-beneficial agreement that can be privately negotiated and implemented without need for Commission intervention. They will also optimize efficiency of spectrum usage:

- The E Block licensee shall enter into good faith negotiations with the public safety broadband licensee for a network sharing agreement. The negotiations would commence when the licenses have been granted.
- The E Block licensee shall consult with the public safety broadband licensee on design, construction, and operation of the shared network on the E Block and the public safety spectrum.

- The E Block licensee shall permit emergency preemption by public safety users on its commercial spectrum according to procedures, protocols, and fees defined in the agreement between the parties.
- The E Block spectrum, with the protections and benefits it provides to public safety, would be exclusively designated for broadband network sharing with the public safety licensee.
- The E Block licensee would have exclusive ability to use public safety broadband spectrum on a secondary and unconditionally preemptible basis.
- The E Block licensee would have access to public safety towers and rights of way to facilitate network buildout.

D. Frontline’s Service Rules Establish an Open Access Network that Will Promote Interoperability, Innovation, and Flexibility for Public Safety and Commercial Communications.

The E Block licensee would be required to operate an open access network. This would ensure greater access and innovation in wireless broadband services and equipment for both the public safety community and commercial service providers. In addition, the open access requirements would provide critical protections for public safety communications. To promote these important goals, *all* spectrum holdings of the E Block licensee would be subject to the open access conditions described below. Otherwise, similarly-situated users could be subjected to unjustifiably different treatment by the same entity based only on the frequencies on which they provide service.

1. *Freedom of Equipment Choice*

One of the Commission’s priorities should be maximum freedom of choice for public safety officials in the equipment they use to serve the public. Freedom of equipment choice will enable public safety to take advantage of affordable, state-of-the-art technology from a variety of vendors in response to their individualized needs. In addition, freedom of equipment choice will spur investment and innovation in the equipment sector.

To promote these benefits, the E Block network provider will be required to allow users to attach any device (or multiple devices) to the network, subject to security requirements and compliance with the published network interface specifications. More specifically, the following requirements will apply:

- The E Block licensee will publish a specification defining acceptable network “attachment” requirements for any network device. The licensee must allow non-discriminatory use of the network by any device meeting these requirements.
- The E Block licensee may not impose limitations on software applications running on network devices, except as may be required to comply with governing laws or to protect the security of the network.

2. *Non-Discriminatory Access*

Open device connectivity would be an ineffectual requirement if the network operator could “pick favorites” among commercial retail providers, applications service providers, and other commercial service partners. Therefore, to unleash the forces of innovation, the E Block operator could not discriminate against, and must make network connectivity available to, any retail service provider. Specifically:

- The E Block licensee must make network connectivity available to any device maker or retail service provider on reasonable commercial terms and may not grant exclusive use to any customer.
- The E Block licensee must offer use of the network to any public safety user on reasonable commercial terms.

3. *Open Services and Content*

For similar reasons, it is important that public safety agencies have unfettered and prompt end-to-end access to edge-based IP applications developed for public safety communications. Accordingly, the E Block network provider must operate its IP network according to principles that are widely accepted in the wireline broadband Internet community. Specifically:

- The E Block licensee will be prohibited from blocking users from accessing IP services (including voice services) or content provided by unaffiliated parties, or otherwise engaging in unreasonable discrimination against such services or content, except with the consent of the user or as required by law.
- The E Block licensee must publish and enable application control interfaces, including quality-of-service guarantees and location-based services APIs, on commercially reasonable terms (which may be different from standard network terms).

4. *Open Access Network Requirement*

The E Block spectrum should be allocated for use as an open network available on a wholesale basis to a host of innovative service providers. This requirement provides a critical protection for public safety communications and is thus an essential part of the Plan.

The Commission adopted a similar requirement in the *Guard Band Service Rules* proceeding in which it created “Guard Band Managers” that leased spectrum to third parties while retaining important oversight responsibilities over the spectrum as a whole to protect public safety communications.¹⁷ The Commission stressed the dual benefits that Guard Band Managers provide by both promoting commercial efficiencies and simultaneously protecting public safety:

We believe implementing such new licensing approaches in appropriate circumstances will promote the development and rapid deployment of new technologies, products, and services for the benefit of the public. . . . The Guard Band Manager will carry with it important responsibilities, paramount among them the obligation to control use of the Guard Band spectrum to ensure that operations on these frequencies do not interfere with public safety.¹⁸

¹⁷ *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, WT Docket No. 99-168, ¶ 2, 26-35 (2000).

¹⁸ *Id.* at ¶ 29-30.

If the E Block licensee dedicated its capacity to its own retail business use, other innovative and beneficial uses would be discouraged or shut out. It could select technologies and modes of operations to benefit its retail business and not the needs of other service providers or public safety. Those interested in using 700 MHz spectrum for businesses that cannot support mission-critical operations can bid for the substantial amounts of other spectrum being auctioned in the 700 MHz band. There are already four national service providers and they have access to adequate spectrum with the frequencies already licensed to them and the additional 700 MHz frequencies they will be able to bid for. Given these circumstances, the far better course is for the Commission to set aside the E Block for open access use — a use that can be achieved only if the E Block spectrum is limited to open access operations.

The open access requirement would serve other important public policy objectives as well, such as removing incentives for the network operator to differentiate or discriminate in the complementary or “upstream” retail markets. National wholesale service would add significant value to various types of retail services by providing commercial capacity to fill in gaps and to provide roaming capability.

E. Frontline’s Proposed Service Rules Promote Investment in a Nationwide Public Safety Broadband Network.

1. *License Term/License Area*

The E Block license should be auctioned as a single, national license of 15 years duration, and it should be renewable. Given the aggressive build-out requirements for this license and the size of the investments required, a substantial license term is appropriate, particularly since a shorter license term when coupled with these requirements could substantially deter auction participation.

Granting a national license for this portion of the 700 MHz commercial spectrum would promote the construction of, and investment in, a national public safety broadband network in a number of ways. First, it ensures that the public safety network will be nationwide and therefore can enjoy maximum interoperability. Second, it promotes accountability by vesting responsibility with a single licensee. Third, a single licensee can capture efficiencies and economies of scale in construction and operation of the public safety network. Fourth, establishing a national license will provide incentives for capital investment and will lower the transaction costs of obtaining funding. Further, adopting a 15-year, renewable license term will further promote investment by providing the certainty and security required for capital expenditures of this magnitude. Finally, the national licensee should be a private-sector entity in order to ensure maximum efficiency of the auction. This last requirement ensures that bids and costs will be determined by the private market, which will ensure more efficient prices.

Frontline's proposal for a national licensee is readily distinguishable from prior proposals for national geographic licenses.¹⁹ Its purpose is to solve public safety's broadband and interoperability problems, not to address commercial concerns such as minimizing "aggregation risk." Moreover, the proposal is distinguishable in its scope. Previous commenters proposed a national licensee for the entire 20 MHz of the commercial D Block. Frontline's proposal, by contrast, splits the D Block, allowing for a national licensee on 10 MHz, while preserving the Commission's flexibility to establish smaller service areas for licenses covering the remaining 20 MHz.

¹⁹ See, e.g., Joint Comments of DirecTV, Inc. and EchoStar Satellite, LLC, *Service Rules for the 698-746, 747-762 and 777-792 MHz Bands*, WT Docket No. 06-150, at 3-7 (Sept. 29, 2006).

F. Frontline’s Proposed Service Rules Expand and Facilitate Coverage in Rural Areas.

1. *Nationwide Roaming*

Ensuring widespread and robust wireless service in rural areas is important for both public safety and commercial uses. Accordingly, the E Block licensee would be required to offer roaming to any provider with customers that use devices compatible with the open protocol interface of the E Block network. This requirement will not only promote public safety in rural areas, but will allow the Commission to address proactively the long-standing roaming problem faced by small and rural carriers, allowing them to provide “national” service by providing roaming, on reasonable rates, outside their local service areas. In addition, access to a robust, reliable, high-quality wireless network will enable small clinics and mobile health care workers in otherwise uncovered areas to access state-of-the-art IP applications such as remote video feeds and the downloading of visual information. The network would also allow critical infrastructure providers to extend the remote monitoring of key equipment and services to new areas.

In addition, all spectrum holdings of the E Block licensee would be subject to a nationwide roaming requirement. This requirement is necessary to ensure that the E Block licensee has no incentive to discriminate among customers based on whether they used the E Block spectrum or other spectrum licensed to the E Block licensee. Without this requirement, a provider could shift users (without their knowledge) to another band and then deny those users the protections specified by the Commission in this proceeding.

2. *Power Limits*

Frontline supports the Commission’s efforts to promote expanded wireless service in rural areas. Accordingly, the Commission should carefully consider the proposals in the

NPRM to adjust power limits in the Upper 700 MHz band in rural areas so as to permit greater and more efficient coverage in sparsely populated areas.²⁰ Further, the Commission should consider whether distinct rules are necessary for “super rural” areas. In considering these proposals, the Commission should coordinate closely with the public safety community to develop appropriate rules.

III. CONCLUSION

The 700 MHz band represents the only current and foreseeable opportunity to meet public safety’s critical spectrum needs and other important policy objectives (including the broader needs of the health care providers and critical infrastructure industry, particularly in rural America). To help the Commission seize this opportunity, Frontline will work with the Commission, the public safety community and other stakeholders to foster wireless broadband network availability for public safety and other users. Implementing Frontline’s Plan will not only make Americans safer. It will also extend the innovation of the Internet to the wireless domain, so Americans are free to enjoy the most innovative services wherever they may roam.

²⁰ *NPRM*, ¶ 90-98.

Respectfully submitted,

A handwritten signature in black ink that reads "John Blevins". The signature is written in a cursive style and is centered on the page.

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