

**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
)	
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 AT&T INC.

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SUMMARY

The Commission has a clear choice to make: Either continue to embrace a market-oriented flexible-use approach to 700 MHz licensing, or abandon this policy and follow a “command and control” route by picking winners and losers. Some commenters want the Commission to favor broadband Internet access to justify giving some entities unearned advantages and keeping others out. The Commission should resist those proposals and continue its policy of relying on the marketplace to determine the best use of spectrum.

These advocates are wrong to assume that the FCC needs to actively promote broadband competition by using its 700 MHz auction rules to create a “third pipe” for broadband. In fact, an increasing number of Americans have more than two sources of broadband service, and many can choose from more than four or five. Competition is increasing in broadband, as shown in the ongoing broadband inquiry.

The *Further NPRM* sought comment on eleventh-hour proposals by certain groups to restrict the eligibility of incumbents to hold 700 MHz licenses or to favor new entrants through bidding credits. There was essentially no support for these proposals, which were opposed by a wide variety of commenters. Among the important points made were that the Commission should not attempt to outguess the market by imposing restrictions, that limitations on eligibility would unduly hamper rural telephone companies, and that a new-entrant credit would upset the level playing field among all new entrants. Only Google — a large corporation — supported new-entrant bidding credits. Two commenters raised the possibility of a spectrum cap, but that would be both contrary to prior decisions finding caps unnecessary and beyond the scope of this proceeding.

Many commenters opposed proposals to place restrictions on the possible new E Block license championed by Frontline as “poison pills” designed to ward off competitive bidders for that block. The conditions also violate the principles of service and technical neutrality and licensee flexibility that have been at the core of Commission spectrum policy for over a decade. Requiring licensees to structure their businesses based on a particular service model is contrary to the policy followed in this proceeding. Similarly, the Commission should not mandate a wholesale-only business model, which would be inconsistent with the same core principles and would discourage investment in new and innovative services. Moreover, the Commission should not place critical public safety infrastructure at risk by tying it to an untried wholesale business model for commercial services.

Many commenters opposed Frontline’s public safety proposal, with some claiming it would be a step backward for public safety. Public safety groups questioned the “free” nature of the network, given that the commercial operator would charge for its use; and some public safety groups indicated they had no desire to participate in such a system as they are building their own systems. Furthermore, there is nothing on which to judge whether the Frontline system would even be viable particularly given the \$10-15 billion cost estimate and its buildout proposal.

If the Commission decides to rely on a public/private partnership for a shared network, it must establish clear obligations before the auction to ensure the E Block licensee delivers the public safety services for which the spectrum is allocated.

AT&T continues to support the band plan it proffered in its comments. Most importantly, a guard band is required between the Lower 700 MHz C Block and the Upper 700 MHz C Block, due to the potential for interference.

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To: The Commission

COMMENTS OF AT&T INC.

AT&T Inc. ("AT&T") hereby replies to comments filed in response to the Commission's *Further Notice of Proposed Rulemaking*¹ concerning service and competitive bidding rules for the 700 MHz Band.²

I. INTRODUCTION

The Commission has a clear choice to make: Either continue to embrace a market-oriented flexible-use approach to 700 MHz licensing, or abandon this policy and follow a "command and control" route by picking winners and losers.

¹ *Service Rules for the 698-746, 747-762 and 777-792 MHz Bands*, WT Dockets 06-150 *et al.*, *Report and Order and Further Notice of Proposed Rulemaking*, FCC 07-72 (April 27, 2007) ("*Report and Order*" or "*Further NPRM*").

² The "700 MHz Band" consists of the "Lower 700 MHz Band" (698-746 MHz), the "Upper 700 MHz Band" (746-764 and 776-794 MHz), and the "Upper 700 MHz Public Safety Band" (764-776 MHz).

To date, the Commission has wisely chosen to rely on the market. Rather than design the allocation and the rules for the Upper and Lower 700 MHz Bands to favor particular uses or users, the Commission has sought to make the spectrum accessible to a wide variety of potential licensees and to permit it to be used flexibly, for many different applications and services — both existing and potential. This approach, which was decided earlier in the proceeding, is consistent with the Commission’s long-standing wireless policy³ and carries out the Congressional mandate to rely on auctions to determine the highest and best use of the spectrum.

A small number of commenters seek to turn this policy on its head, asking the Commission to impose rules on some or all of this spectrum that will favor one particular use — broadband Internet access — and disfavor others, and grant some entities unearned advantages in the auction while keeping other companies out entirely. The public would ultimately be the loser if the Commission were to adopt such regulations. As noted by Chairman Martin, “a competitive marketplace — rather than economic regulation — provides the greatest benefits to the American consumer.”⁴

³ See *Service Rules for the 746-764 and 776-794 MHz Bands*, WT Docket 99-168, *Third Report and Order*, 16 FCC Rcd 2703, ¶ 42 (2001); cf. *Liberalization of Technology and Auxiliary Service Offerings in the Domestic Public Cellular Radio Telecommunications Service*, Gen. Docket 87-390, *Report and Order*, 3 FCC Rcd 7033 (1988); *Memorandum Opinion and Order*, 5 FCC Rcd 1138 (1990) (FCC provided flexibility to use alternative technologies, specifying no particular digital standard); *New Personal Communications Services*, Gen. Docket 90-314, *Second Report and Order*, 8 FCC Rcd 7700 (1993); *Memorandum Opinion and Order*, 9 FCC Rcd 4957 (1994); *Third Memorandum Opinion and Order*, 9 FCC Rcd 6908 (1994) (FCC provided licensees the “maximum degree of flexibility” with regard to both technology and services); see also *Interconnection and Resale Obligations Pertaining to Commercial Mobile Radio Services*, CC Docket 94-54, *Second Report and Order and Third Notice of Proposed Rulemaking*, 11 FCC Rcd 9462, 9477 (1996); see also *FCC Strategic Plan – 2006-2011* at 8 (Competition Policy, Objective 1), available at <http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-261434A1.pdf>; *Principles for Reallocation of Spectrum to Encourage the Development of Telecommunications Technologies for the New Millennium*, *Policy Statement*, 14 FCC Rcd 19868, 19871-72 (1999).

⁴ Separate Statement of Chairman Kevin J. Martin, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, Eleventh Report, 21 FCC Rcd 10947 (2006); see Separ-

(continued on next page)

AT&T, like numerous commenters, urges the Commission to continue on its path of maintaining technology and service neutrality for this band. The Commission should rely on the marketplace to decide the highest and best use of the 700 MHz band.

II. 700 MHz, BROADBAND COMPETITION, AND THE THIRD PIPE

Several parties urged the Commission to adopt particular rules or policies — either for all 700 MHz commercial licensees or for only a possible new E Block licensee in the Upper 700 MHz band⁵ — that are specifically intended to promote 700 MHz as a “third pipe” for the delivery of broadband Internet access to the home.⁶ This approach, however, would mark a departure from the Commission’s “hands-off” approach to the Internet, which “let[s] the marketplace, not the government, pick the winners and losers among new services”⁷ and service providers as well as violating the established policy of technical and service neutrality.

More fundamentally, however, those parties are simply wrong in assuming that the FCC needs to actively promote competition in broadband Internet access through its 700 MHz auction rules. The principal advocates of turning 700 MHz spectrum into a source of additional broadband competition rely on the mistaken notion that the 700 MHz spectrum

(footnote continued)

rate Statement of Commissioner Kevin J. Martin, *EchoStar Communications Corporation*, CS Docket No. 01-348, *Hearing Designation Order*, 17 FCC Rcd 20559 (2002) (“Generally, I believe market forces are the most effective means of delivering choice, innovation, and affordability to consumers.”).

⁵ One option set for comment was a band plan for the Upper 700 MHz band that creates an E block license out of the existing D block license.

⁶ See Computer and Communications Industry Association (“CCIA”) Comments at 2; Center for Democracy & Telecommunications (“CDT”) Comments at 2, 4-5; Frontline Comments at 14-16; Google Comments at 4-6; *Ad Hoc* Public Interest Spectrum Coalition (“PISC”) Comments at 7-10, 13-16.

⁷ Jason Oxman, *The FCC and the Unregulation of the Internet*, FCC Office of Plans and Policy Working Paper No. 31 at 24 (July 1999); see also 47 U.S.C. § 230(b)(2) (establishing that the policy of the United States is “to preserve the vibrant and competitive free market that presently exists for the Internet and other interactive computer services, *unfettered by Federal or State regulation.*”) (emphasis added).

is critical to creation of another broadband competitor. They point to comparative international broadband penetration statistics (which cannot be compared with U.S. statistics on an apples-to-apples basis) and then simply declare the U.S. broadband market noncompetitive.⁸ In fact, more than two sources of broadband service already are available to an increasing number of Americans — many can choose from more than four or five — and the level of competition in the broadband market is growing rapidly, with multiple providers offering consumers a wide variety of broadband service options at increasing speeds and decreasing prices.

The Commission has an inquiry into the broadband market underway right now,⁹ and the comment record demonstrates the competitive nature of the broadband market.¹⁰ The U.S. broadband marketplace bears the hallmark of a competitive market: A substantial number of firms are aggressively deploying new broadband facilities and services, which has resulted in greater competition, lower prices, and faster, more innovative services for consumers. There are a variety of new sources of broadband services available from mobile and fixed wireless operators using 3G and 4G technologies, in addition to traditional sources.¹¹ In addition, there are increasingly ubiquitous public Wi-Fi hot spots, both free

⁸ See PISC Comments at 2-4, Frontline Wireless LLC (“Frontline”) Comments at 14.

⁹ See *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996*, GN Docket 07-45, *Notice of Inquiry*, FCC 07-21 (April 16, 2007) (*Broadband Inquiry*).

¹⁰ See generally AT&T Reply Comments, GN Docket 07-45 (filed May 31, 2007); see also Verizon Comments, GN Docket 07-45, at 3-31 (filed May 16, 2007); CTIA Comments, GN Docket 07-45, at 3-8 (filed May 16, 2007); Clearwire Comments, GN Docket 07-45, at 2-7 (filed May 16, 2007); Sprint Comments, GN Docket 07-45, at 4-7 (filed May 16, 2007); National Cable Television Association (“NCTA”) Comments, GN Docket 07-45, at 5-15 (filed May 16, 2007); National Telephone Cooperative Association (“NTCA”) Comments, GN Docket 07-45, at 4-5 (filed May 16, 2007).

¹¹ Because different technologies are used for the various forms of broadband service, each has its own unique characteristics. Moreover, often the providers of broadband service offer unique features or content,
(continued on next page)

and commercial, that provide yet another alternative along with satellite broadband and nascent broadband over power line services.

Three years ago, the Commission found that “the competitive nature of the broadband market, including new entrants using new technologies, is driving broadband providers to offer increasingly faster service at the same or even lower retail prices.”¹² Since that time, the number of broadband subscribers has more than doubled to 64 million and there are now more than 1,300 entities providing broadband service in the U.S.¹³ Far from restricting output, the incumbent broadband service providers and wireless companies have been investing billions of dollars to deploy new high-speed networks that will support the next generation of advanced broadband services which will increase competition. Moreover, the regulatory policies that have led to increased competition without government mandates has already evolved beyond mere competition to broadband but to competition for customers with “triple play” or “quadruple play” combinations of voice, video, Internet and wireless services.¹⁴

(footnote continued)

or take advantage of their technologies’ special characteristics, as a way of differentiating their service from others’ offerings. Some proponents of regulation disparage the resulting offering as a “walled garden.” *See, e.g.,* PISC Comments at 7. This is simply part of a competitive market, in which competitors attempt to distinguish their offerings from those available from others. If all providers offered only commodity Internet access, there would be little basis for competitive differentiation. By adding their own unique characteristics to their service offerings, providers make broadband a more competitive market.

¹² *Availability of Advanced Telecommunications Capability in the United States*, GN Docket 04-54, *Fourth Report to Congress*, FCC 04-208 at 13 (March 17, 2004) (*Fourth 706 Broadband Report*).

¹³ Industry Analysis Division, Wireline Competition Bureau, *High-Speed Services for Internet Access: Status as of June 30, 2006*, at Tables 1, 7 (Jan. 2007) (*Broadband Data Report*), available at <http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-270128A1.pdf>.

¹⁴ *See Cable TV looks for new ways to move onto rivals’ turf*, Atlanta Journal-Constitution (May 10, 2007); *Time Warner makes wireless launch*, San Antonio Express-News (April 24, 2007); *Telecom giants roll out service; Sprint and Time Warner team up*, Kansas City Star (April 23, 2007).

The Commission's statistics show that the number of areas with more than two sources of broadband service has increased rapidly.¹⁵ Given that fact, together with the Commission's decision to follow a flexible use policy, it would be a serious error for the Commission to base its 700 MHz spectrum policies on the perceived need for a third source of broadband.¹⁶

III. THE RECORD DOES NOT SUPPORT ADOPTION OF ELIGIBILITY RESTRICTIONS AND SIMILAR MEASURES ADVOCATED BY PISC

In the *Further NPRM*, the Commission sought comments on a number of eleventh-hour proposals by PISC to restrict the eligibility of incumbent local exchange carriers ("ILECs"), incumbent cable operators and large wireless carriers to bid for or hold 700 MHz Band licenses, or, alternatively, to favor new entrants through bidding credits.¹⁷ In soliciting comments, the Commission did not tentatively conclude that it should adopt any of the proposals.

Over 130 formal comments were filed in response to the *Further NPRM*, and the PISC proposals outlined in the *Further NPRM* received essentially no support. Moreover, they were vigorously opposed by a wide array of commenters, including small businesses and new entrants.¹⁸

¹⁵ See *Broadband Data Report* at Tables 1, 2, 7.

¹⁶ *Motor Vehicles Manufacturers Association v. State Farm Mutual Automobile Insurance Co.*, 463 U.S. 29, 43, 57 (1983).

¹⁷ See *Further NPRM* at ¶ 221, citing *Ex Parte* Comments of the *Ad Hoc* Public Interest Spectrum Coalition (April 3, 2007) (PISC *Ex Parte* Comments).

¹⁸ See 700 MHz Independents (Central Wisconsin Communications, LLC, *et al.*) Comments at 10-11; ALLTEL Comments at 14; AT&T Comments at 20-34; Blooston Rural Carriers Comments at 6-7; Computer and Communications Industry Association ("CCIA") Comments at 5 (opposing all eligibility restrictions, but supporting separate subsidiary requirement); CTIA—The Wireless Industry Association[®] ("CTIA") Comments at 10-17; Enterprise Wireless Association ("EWA") Comments at 3-4; Frontier Communications Solutions ("Frontier") Comments at 12-13; MetroPCS Comments at 11-13, 42-45; Motorola Comments at 35-36;

(continued on next page)

No commenter other than PISC supported restricting eligibility.¹⁹ Only one commenter other than PISC supported new-entrant bidding credits.²⁰ And only one commenter supported the PISC fallback of a separate subsidiary requirement for ILECs, which PISC itself apparently no longer advocates.²¹ The Commission cannot ignore the comment record, which weighs decidedly in favor of continued open entry to the auction, and against imposing eligibility restrictions.²²

PISC's lengthy comments devote but a single page to its arguments for restrictions and new-entrant bidding credits. PISC provides no new facts, no new policy arguments, and no new legal analysis to support its proposed restrictions. Elsewhere in its comments, it reiterates the same allegations and resubmits the same economic papers that appeared in its earlier filing.²³

(footnote continued)

National Telephone Cooperative ("NTCA") Comments at 7-8; Qualcomm Comments at 8-11; Rural Telecom Group Comments at 12-13; SpectrumCo Comments at 4-5, 7, 30-33; Telecommunications Industry Association ("TIA") Comments at 5-7; Verizon Wireless Comments at 31-35; Wirefree Comments at 7-8 (opposing new categories of bidding credits); *cf* Frontline Comments at 60 n.90 (bidding credit rules "should not deny eligibility to an entire class of bidders").

¹⁹ See PISC Comments at 5, 34-35.

²⁰ See Google Comments at 9-10; *cf*. PISC Comments at 35 (PISC said the new-entrant bidding credit lacked certainty and required further definition, but "does have several positive aspects").

²¹ See CCIA Comments at 5. PISC's comments do not even mention the separate subsidiary requirement it had formerly advocated, even though the *Further NPRM* specifically sought comment on this alternative. In any event, the Commission has definitively rejected the use of separate subsidiary requirements for the provision of wireless services. See *Amendment of the Commission's Rules to Establish Competitive Service Safeguards for Local Exchange Carrier Provision of Commercial Mobile Radio Services*, WT Docket 96-162, *Notice of Proposed Rulemaking, Order on Remand, and Waiver Order*, 11 FCC Rcd 16639 (1996). No reason has been shown for overturning this policy.

²² *Telocator Network of America v. FCC*, 691 F.2d 525, 549-50 (D.C. Cir. 1982).

²³ See PISC Comments at 6-12, Appendix B, Appendix C; *Further NPRM* at ¶ 251. Two other commenters — Frontline and Google — echoed some of PISC's allegations, but neither supported eligibility restrictions and only Google supported a new entrant bidding credit. See Frontline Comments at 4-16; Google Comments at 4.

AT&T's opening comments have already addressed PISC's proposals, showing that such restrictions, among other things, run counter to at least three positions the FCC adopted in previous 700 MHz orders: (1) a determination that flexible spectrum use would achieve the highest and best use of the 700 MHz band; (2) a determination that the widest possible involvement of interested parties will spur innovation; and (3) a determination that including incumbents in the auction would increase the likelihood that the band will be fully developed and deployed. AT&T also debunked the premises for PISC's proposed restrictions and new-entrant bidding credits.²⁴

Commenters opposed to PISC's proposals provided additional reasons for rejecting them. SpectrumCo observed that "the Commission has garnered extremely poor results in its past attempts to obtain the 'procompetitive benefits of licensing' by restricting competition at the auction stage" and urged the Commission not to "repeat the mistakes of the past by taking the counterproductive step of trying to divine the 'market' in which the spectrum will be used (despite flexible use policies) and then limiting eligibility for 700 MHz licenses in an attempt to promote competition and new entry into that 'market.'"²⁵ It correctly describes PISC's "vague and purely speculative statements" about behavior in prior auctions as a "failed history lesson" that does not "acknowledge that the most appropriate comparison for any 700 MHz auction design that would impose such burdensome and inefficient restrictions on participation and spectrum use would be the Commission's earlier, failed attempts to substitute its own judgments for those of the market."²⁶ Moreover, several commenters pointed out that eligibility restrictions would make rural telephone com-

²⁴ See AT&T Comments at 20-34, 38-39.

²⁵ SpectrumCo Comments at 31-32.

²⁶ *Id.* at 32-33 (referring to LMDS auction, PCS C Block auction, *inter alia*).

panies ineligible to bid, even though Congress specifically sought to provide them with opportunities to participate in auctions.²⁷

The new-entrant bidding credit that PISC had proposed was directly opposed by a company that is both a potential new entrant and a small business. Wirefree argued that, in the interest of “a level playing field for all new entrants,” the Commission should “resist the call to create special categories, beyond business size, for bidding credits and other preferences and give all new entrants an equal and fair opportunity to acquire spectrum in the auction.”²⁸ The only commenter supporting new-entrant bidding credits was Google²⁹ — which, as a non-incumbent, would be eligible for the credit, as would companies like Microsoft, Intel, and Motorola, if they were to apply to bid in the auction. Corporations with market capitalizations in the hundreds of billions of dollars should not be awarded bidding credits, especially if these same advantages are denied to rural telephone companies because of their incumbent status.³⁰

²⁷ See, e.g., Blooston Rural Carriers Comments at 6-7; NTCA Comments at 7-8; Rural Telecom Group Comments at 12-13.

²⁸ Wirefree Comments at 7-8. Moreover, even PISC recognizes that adoption of such a rule would be problematic. The bidding credit, which it treats as the Commission’s proposal rather than its own, says the proposal lacks “certainty” and says “the Commission must take care in establishing the rules to properly define ‘new entrant’ and prohibit relationships with entities that have incentive to exclude genuine new competitors.” PISC Comments at 35. PISC offers no input on what the details of the rule should be, however. Accordingly, if the Commission *arguendo* were to conclude it has authority to adopt a new-entrant bidding credit, there would need to be further notice and comment proceedings to determine who constitutes a new entrant and what relationships are barred for a new entrant.

²⁹ Google Comments at 9-10. In addition, an economic paper attached to Frontline’s comments advocated a new-entrant bidding credit, see Andrzej Skrzypacz and Robert Wilson, *The Design of the 700 MHz Spectrum Auction: An Opportunity to Promote Competition and Public Safety*, Exhibit 1 to Frontline Comments, at 23-25, but Frontline chose not to take any position on the issue.

³⁰ ALLTEL’s proposed alternative to the new-entrant bidding credit, an incumbent bidder’s premium, see ALLTEL Comments at 14, is an entirely new concept, never before employed by the Commission, which finds no support in the statute and was not set for comment in the *Further NPRM*. If the Commission wished to consider a bidder’s premium, it would need to have further notice and comment rulemaking.

Finally, two commenters tentatively floated the alternative of a spectrum cap,³¹ a previous proposal set forth by PISC³² that the Commission did not deem worthy of mention in its solicitation of comments in the *Further NPRM*. Accordingly, adoption of a spectrum cap is beyond the scope of the current rulemaking.³³ In any event, it is clearly not warranted. As TIA points out, the FCC found that the CMRS spectrum cap was “no longer required in a competitive marketplace,”³⁴ and MetroPCS notes that the Commission has subsequently declined to use a cap in other proceedings.³⁵

IV. THE COMMISSION SHOULD NOT ADOPT “POISON PILL” RULES ADVOCATED BY SOME SPECIAL INTERESTS

The *Further Notice* sought comment on a number of rules or conditions that Frontline and PISC requested for a possible new national E Block license, in addition to public safety joint-network buildout requirements.³⁶ Frontline had asked the Commission to subject the E Block licensee to requirements including a wholesale-only business model,

³¹ See Cyren Call Comments at 40 (suggesting consideration of a spectrum cap for combinatorial bidding if the Commission is concerned about aggregation of spectrum, but not directly advocating such a cap); United States Cellular Corp. (“USCC”) Comments at 21 (opposing all restrictions on eligibility, but stating that if the Commission is concerned about aggregation of spectrum, it could open a proceeding to consider a spectrum cap).

³² PISC Feb. 3 *Ex Parte* at 19.

³³ See USCC Comments at 21. Given that there has been no notice of what spectrum the cap would pertain to, how affiliations among companies would be defined, or what ownership levels and spectrum overlaps would be the triggers for the cap, a further round of notice and comment would clearly be required to adopt any such rules. See 5 U.S.C. § 553(b)-(c) (requiring notice of the subject of proposed rules and opportunity to comment).

³⁴ TIA Comments at 6. See *Amendment of the Commission’s Rules to Establish Competitive Service Safeguards for Local Exchange Carrier Provision of Commercial Mobile Radio Services*, WT Docket 96-162, *Notice of Proposed Rulemaking, Order on Remand, and Waiver Order*, 11 FCC Rcd 16639 (1996); *2000 Biennial Regulatory Review – Spectrum Aggregation Limits for Commercial Mobile Radio Services*, WT Docket 01-14, *Report and Order*, 16 FCC Rcd 22668 (2001).

³⁵ MetroPCS Comments at 44.

³⁶ See *Further NPRM* at ¶ 290. The Commission sought comment on a Frontline proposal to create a national license in the Upper 700 MHz Band referred to as the E Block license, using spectrum taken from the Upper 700 MHz D Block license under the current band plan. For the sake of simplicity, the term “E Block” will be used to refer to this spectrum hereafter, rather than the existing E Block in the Lower 700 MHz band, which is unrelated to the Frontline proposal.

roaming requirements, open access on all of the licensee's spectrum, *Carterfone* attachment obligations,³⁷ and other "net neutrality" requirements. PISC endorsed Frontline's requests but also asked for open access and "net neutrality" conditions applying to a total of 30 MHz of commercial 700 MHz spectrum. In its comments, Frontline has now proposed a further restriction based on a recent Google *ex parte* filing that would force the E Block licensee to devote 25% of its commercial network capacity to an open auction communications service.³⁸ PISC's comments proposed that "net neutrality" and *Carterfone* mandates apply to all 700 MHz licensees.³⁹ None of these proposals would serve the public interest and all of them should be rejected.

A. The Restrictions Are Designed to Limit Competition for the E Block, Contrary to the Purposes of this Proceeding

Several parties described these restrictive conditions as "poison pills" with no purpose other than to ensure that Frontline will have little or no competition for E Block licenses.⁴⁰ The conditions would make the E Block business model unattractive to companies not planning to sell commodity-like broadband Internet access exclusively on a

³⁷ See *Use of the Carterfone Device*, 13 F.C.C.2d 420, *recon.*, 14 F.C.C.2d 571 (1968). The term *Carterfone* is often used not only to refer to the actual *Carterfone* decision, which involved the validity of tariff provisions governing foreign attachments, but also to the subsequent rulemaking establishing rules for the attachment of customer-supplied terminal equipment to common carrier telephone lines, see *Message Toll Service (Terminal Equipment Registration)*, Docket 19528, *First Report and Order*, 56 F.C.C.2d 593 (1975), *Second Report and Order*, 58 F.C.C.2d 736 (1976), *aff'd sub nom. North Carolina Utilities Commission v. FCC*, 552 F.2d 1036 (4th Cir. 1977). By extension, the term is used as a shorthand for the establishment of standardized interface requirements and attachment rights regarding wireless terminal equipment.

³⁸ Frontline Comments at 23-24, *citing Ex Parte* Letter from Richard Whitt, Counsel to Google, to Marlene Dortch, FCC Secretary (May 21, 2007). The Commission has issued a public notice establishing a separate comment and reply date regarding the Google *ex parte* letter. Public Notice, *Comment Sought on Google Proposals Regarding Service Rules for 700 Mhz Band Spectrum*, WT Docket 06-150 *et al.*, DA 07-2197 (May 24, 2007), *summarized*, 72 Fed. Reg. 29930 (May 30, 2007). AT&T will address the Google *ex parte* filing in separate comments responsive to this public notice.

³⁹ PISC Comments at 22-29.

⁴⁰ See CTIA Comments at 18; MetroPCS comments at 10, 49, 52, 55; Verizon Wireless Comments at 5, 7, 44, 45, 53, 56.

wholesale basis.⁴¹ Any company planning to use spectrum to offer innovative information services or content, or to provide retail services directly to millions of Americans, would be out of luck under the Frontline/PISC rules. The “poison pill” characterization is apt.

AT&T showed in its comments that the Frontline/PISC conditions should be rejected as (1) premature, given the ongoing *Broadband Inquiry*⁴² and *Skype*⁴³ proceedings, (2) contrary to the Commission’s policy of promoting technical and service neutrality in reliance on market forces, and (3) unnecessary to ensure public safety access to commercial spectrum. AT&T noted that such conditions appear to be directed at getting Frontline’s business plan codified into the rules so as to predetermine the use of the spectrum.⁴⁴

Only a handful of commenters favored restrictions of the sort Frontline and PISC proposed.⁴⁵ While not denying that they will inevitably have the effect of reducing or eliminating Frontline’s competition (should there be an Upper 700 MHz E Block auction), these commenters provide no reasoned justification for departing from the Commission’s policy of technical and service neutrality by mandating that all E Block bidders adopt Frontline’s business plan.

⁴¹ See, e.g., ALLTEL Comments at 5.

⁴² See *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996*, GN Docket 07-45, *Notice of Inquiry*, FCC 07-21 (April 16, 2007) (*Broadband Inquiry*).

⁴³ Skype Communications S.A.R.L., *Petition to Confirm a Consumer’s Right to Use Internet Communications Software and Attach Devices to Wireless Networks*, RM-11361 (filed Feb. 20, 2007); see Public Notice, *Petitions for Rulemaking Filed*, Report No. 2807 (CGB Feb. 28, 2007).

⁴⁴ See AT&T Comments at 7-12.

⁴⁵ See CCIA Comments at 5-7; Center for Democracy & Technology (“CDT”) Comments at 5-8; Frontline Comments at 17-26; Google Comments at 2, 8-9; PISC Comments at 12-29; Vanu Comments at 4-5.

B. The Commission Should Not Base its Requirements for 700 MHz Commercial Licensees on Service-Specific Objectives

The principal arguments advanced in support of the open access and Net Neutrality conditions are based on a perceived need to promote competition in broadband Internet access.⁴⁶ Section III, above, shows that there is no need to adopt eligibility-restricting rules related to the 700 MHz bands to promote broadband competition, much less devote all or part of the 700 MHz Band to that objective. In any event, the adoption of rules designed to promote particular technologies or services is inconsistent with the Commission policy of flexible spectrum use and the related policies of technical and service neutrality.⁴⁷

The flexible use concept is closely intertwined with the decision by Congress to mandate the use of competitive bidding to ensure that spectrum is used for its highest and best use. Over a decade ago, Chairman Reed E. Hundt (now the vice chairman of Frontline) clearly enunciated this precept: “How should the spectrum be used? Any way the auction winners want: no restrictions; no rules; total flexibility.”⁴⁸ Accordingly, the Commission has sought to maintain neutrality about what technologies are used and what services are offered, leaving licensees’ business plans to be determined by market forces instead of regulations.⁴⁹ The Wireless Communications Association shows that the Commission has already considered and rejected the notion of favoring one technology or service over others in its 700 MHz commercial spectrum rules:

⁴⁶ See *supra* note 6.

⁴⁷ See *supra* note 3.

⁴⁸ Speech By Reed Hundt, Chairman, FCC, at the Royal Institute Of International Affairs, London, England, *Seven Habits Of Hopefully Highly Successful Deregulatory Communications Policy People*, 1996 FCC LEXIS 5014, *21 (Sept. 21, 1996).

⁴⁹ See AT&T Comments at 10.

To date, the Commission has wisely followed the path of technology and service neutrality in its commercial 700 MHz proceedings, not endorsing one potential use of spectrum over others, within broad limits. The Commission's *Upper 700 MHz First Report and Order* started down this path by allocating spectrum under a flexible use paradigm, seeking to "fulfill[] the need for a variety of wireless services," and not favor and "establish particular service configurations. Rather, the service rules allow licensees to make determinations respecting the services provided and technologies to be used" That order also emphasized "the band's suitability for uses ranging from wideband mobile communications to innovative, fixed wireless Internet access services and new broadcast-type services." Carrying this philosophy forward, the *Report and Order* rejected requests to tailor its technical rules to favor a particular service or technology, within the bounds necessary for prevention of interference.⁵⁰

It would be inconsistent with this flexible use philosophy, pioneered by former Chairman Hundt, for the Commission to require licensees — the E Block licensee or, for that matter, any 700 MHz commercial licensees — to structure their businesses based on rules directed at furtherance of particular objectives for broadband Internet access. Basing the rules for this allocation on that particular use would conflict with the underlying principles of the allocation and thus would be arbitrary and capricious.

Under the flexible use allocation for the 700 MHz Band, commercial licensees must be allowed to choose for themselves which services to offer, voluntarily and free from open access and "net neutrality" mandates. A company such as Frontline is free to choose to offer nothing but broadband Internet access, with no restrictions on equipment or

⁵⁰ Wireless Communications Association International ("WCA") Comments at 13 (footnotes omitted), *citing Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules*, WT Docket 99-168, *First Report and Order*, 15 FCC Rcd 476, 483 ¶ 15, 485 ¶ 18 (2000) (*Upper 700 MHz First Report and Order*) and *Report and Order* at ¶ 91.

applications.⁵¹ This may or may not be something that customers ultimately want.⁵² Another licensee may choose a different approach, managing the network to ensure that individual subscribers do not degrade the service that other users receive, so as to satisfy a greater number of typical users and improve network efficiency.⁵³ Neither of these approaches should be foreclosed. Moreover, other licensees may choose not to offer pure broadband Internet access and instead offer highly specialized information services, photo and music transfers, or video transmissions.⁵⁴ Another class of licensees may choose to use their spectrum to provide niche services tailored to the needs of rural areas, such as se-

⁵¹ Even Frontline’s business plan does not follow the open access and net neutrality principles strictly; its proposed rules would exempt roamer service from these requirements for unexplained reasons. Frontline’s proposed roaming rule states: “The E Block licensee shall provide roaming service to any requesting CMRS operator whose customers are using compatible equipment. *The [open access] requirements of paragraphs (3) and (4) shall not apply to such roaming services.*” Frontline Comments at 25 (emphasis added; bracketed material in original). The referenced open access rules prevent “blocking users from accessing [third-party] services or content . . . or otherwise engaging in unreasonable discrimination” and “block[ing] the connection of any terminal equipment to the network” that meets the licensee’s specifications and is non-harmful. *Id.* at 20-21; *Ex Parte* letter from John Blevins, counsel for Frontline, to Marlene H. Dortch, FCC Secretary, dated March 26, 2007, Attachment (Working Draft Rules) at 4 (proposed § 27.16(a)(3)-(5)), 6 (proposed § 27.51(c)).

⁵² As long as its end users engage in activities that do not consume high bandwidth, such as web browsing or email, they may well enjoy “broadband” speeds. If just a few users start running peer-to-peer file transfer programs, or downloading or uploading large files (*e.g.*, videos, digital photographs, podcasts, or software packages), however, all of the users being served by the same base station or access point will no longer perceive their service as being high-speed. This is because all of those users are sharing the bandwidth offered by a broadband radio channel. As PISC’s engineering consultant makes clear, the “peak aggregate speed” of a radio network pertains to “shared capacity,” and this “peak speed . . . will be divided among the simultaneous users of the spectrum.” The consultant adds, “Where we discuss peak speed here, we are not suggesting that these speeds will be available to all users at any or all times.” Columbia Telecommunications Corp., *Select Technical Issues Raised in the 700 MHz Proceeding* at 9 & n.4, (Appendix A to PISC Comments).

⁵³ Because subscribers have no incentive to minimize their use of bandwidth, and thus may use applications that are inefficient without regard to their effect on the reliability of the network for others, only the network operator “has the incentive to control such subscriber-created externalities that undermine the integrity, security, and efficient and economical use of the wireless network.” AT&T Comments in response to Skype Petition, RM-11361, at 43 (filed April 30, 2007). Such network management controls may be implemented in many ways, including through “usage policies aimed at limiting the use of bandwidth-inefficient applications — *i.e.*, applications that are not optimized for the wireless environment. Such applications consume a disproportionate amount of bandwidth and therefore may affect the quality and reliability of use by other subscribers in the same geographic area.” *Id.* at 53.

⁵⁴ For example, Qualcomm uses its 700 MHz spectrum to transmit multiple channels of encrypted video content using its MediaFLO technology, *see* MediaFLO website, <www.qualcomm.com/mediaflo>, instead of broadband Internet access.

lected weather, commodity, and agricultural information, bundled with basic telephone service and Internet access. All of these approaches are fully consistent with the flexible use philosophy that the Commission has chosen for the 700 MHz Band. The rules should be completely neutral as to particular technologies and services — both for the E Block and for the 700 MHz commercial bands in general.

C. The Commission Should Not Mandate a Wholesale Business Model

Frontline contends that a wholesale business model will promote competition and innovation.⁵⁵ Many others, however, have their doubts.⁵⁶ AT&T has no objection if any given bidder or licensee voluntarily chooses to follow a particular business model, such as operating solely as a wholesaler. That is what “flexible use” and market-based competition based on service distinctions are all about. There is no evidence that a wholesale-only business model for wireless service is even viable, as others have pointed out. Furthermore, there is no guarantee a given business plan is well suited for all providers or all 700 MHz networks, however, and *mandating* a particular business plan such as wholesale-only would be a serious mistake. It would be inconsistent with the auction statute to hold an auction at which truly competitive bidding is foreclosed because the Commission’s rules favor only one company’s business model.

A mandated wholesale business model is bad policy not only because it is inconsistent with the flexible use approach and the auction statute; it also would likely discourage

⁵⁵ See Frontline Comments at 17-20.

⁵⁶ For example, ALLTEL states, “No commercial entity has been able to make such a service viable even with commercially proven technologies (e.g., NextWave filed for bankruptcy after relying on a similar business model). ALLTEL Comments at 7.

investment in new and innovative services. For example, the Commission found that mandating an unbundled business model for DSL had discouraged investment and eliminated that requirement.⁵⁷

The need to avoid a single mandated business plan is especially important if the Commission decides to create an E Block license that will be conditioned on developing the public safety network as well. Creating such a joint network will be a complex and costly matter, and the E Block licensee should not be constrained in how it offers commercial service. If the rules mandate a wholesale-only plan that turns out to be incompatible with the realities of the market, the winner will end up facing business failure, with potentially disastrous consequences for public safety. The Commission should not be gambling the nation's future public safety infrastructure on an experimental business plan.

V. THE COMMISSION SHOULD NOT SET ASIDE A BLOCK OF 700 MHZ SPECTRUM AS PROPOSED BY FRONTLINE WIRELESS

The Commission sought comment on Frontline's proposal to create a new 10 MHz (2×5 MHz) E Block in the commercial upper 700 MHz band.⁵⁸ Frontline has revised its

⁵⁷ *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, CC Docket 02-33 *et al.*, *Report and Order and Notice of Proposed Rulemaking*, 20 FCC Rcd 14853 (2005) (“[T]he record shows that the existing regulations constrain technological advances and deter broadband infrastructure investment by creating disincentives to the deployment of facilities capable of providing innovative broadband Internet access services.”); *see also* Remarks of FCC Chairman Kevin J. Martin, *Regulation, Competition, Telecommunications and Content*, at the Portuguese Association for Communications Advancement, Lisbon, Portugal, at 3 (Nov. 16, 2006) (“Requiring telephone companies to provide access to their DSL facilities created disincentives to invest in and upgrade their infrastructure and created regulatory uncertainty for the entire industry. So, last year, the FCC removed regulations requiring wireline broadband Internet access providers to unbundle and separately tariff the underlying transmission component of their Internet access service. The FCC also revised its regulatory framework by lifting the legacy network sharing, or unbundling requirements, for carriers deploying new fiber networks. These actions have collectively encouraged carriers to invest in infrastructure free of economic regulation.”)

⁵⁸ *Further NPRM* at ¶¶ 268-91.

spectrum proposal and now asks for a 12 MHz (2×6 MHz) E Block,⁵⁹ which would give the E Block licensee nationwide access to 24 MHz of spectrum when the public safety broadband spectrum is added. Frontline’s proposal would convert public safety spectrum, licensed to a qualified public safety organization, into a resource that will principally be used for Frontline’s delivery of commercial service for profit via 22 or even 24 MHz of combined spectrum.⁶⁰

Because public safety spectrum will be commingled with commercial spectrum under Frontline’s proposal, with both public safety and commercial customers receiving service from a “shared” network using either block of spectrum indiscriminately,⁶¹ there will be no *separate* public safety network. This will tie the national public safety licensee to the E Block licensee almost irrevocably. Having no network of its own, the public safety licensee would be unable to take back control over its spectrum and operate its own network or hire another network operator, should it become dissatisfied with the E Block licensee’s performance or charges.

Frontline decries what it describes as a “monopoly market” for broadband services in much of the country,⁶² despite the fact that broadband competition has been growing consistently as new alternatives become available to consumers.⁶³ Ironically, however, Frontline’s plan for public safety would create the real monopoly — public safety would be beholden to a sole source for 700 MHz broadband service, and there would be no com-

⁵⁹ See Frontline Comments at 51-52.

⁶⁰ Indeed, if public safety actually *were* likely to preempt commercial service, it is questionable whether there would be a market for the commercial service, due to its unavailability when it might be most needed.

⁶¹ See Frontline Comments at 46.

⁶² Frontline Comments at v; see *id.* at 4, 14-15.

⁶³ *But see* Section II, above.

petitive alternative sources for that service because the E Block licensee would have the sole use of the public safety spectrum and facilities. Rather than being part of a true public/private partnership, the public safety licensee would instead be completely dependent on its private “partner.”

Frontline’s claims that its plan would solve the “staggering” communications problems faced by public safety⁶⁴ are simply is not true, based on the filings of public safety commenters, who typically focused on public safety alone. As noted in the joint comments submitted by the National Association of Telecommunications Officers and Advisors, the National Association of Counties, the National League of Cities, and the U.S. Conference of Mayors, “it is important to separate the hype from what the plan can and should do to improve public safety broadband service and interoperability”⁶⁵ — “the plan shortchanges our nation’s first responders”⁶⁶ and will have little, if any, concrete benefit for public safety.⁶⁷ Some public safety entities even claimed that adoption of the proposal “will set us backwards in time.”⁶⁸

If Frontline’s proposal truly would solve public safety communications needs, one would expect near-unanimous support for the proposal from the public safety community. The record demonstrates, however, that many responsible for public safety communica-

⁶⁴ Frontline Comments at 2.

⁶⁵ National Association of Telecommunications Officers and Advisors, *et al.* (“NATOA”) Comments at 8.

⁶⁶ *Id.*

⁶⁷ AT&T Comments at 8-13.

⁶⁸ *See* City and County of San Francisco (“SF”) Comments at 3; Orange County Comments at 2.

tions oppose the proposal as either harmful or simply unworkable.⁶⁹ As demonstrated below, virtually every aspect of Frontline’s “public safety plan” was attacked.

A. Funding

Frontline claims that its proposed nationwide, broadband, interoperable, public safety network would cost \$10 to \$15 billion to build,⁷⁰ and that using its scheme will result in the network being built and funded by a private entity.⁷¹ NATOA notes that “the desire to take a bite of Frontline’s funding carrot is quite tempting. But upon closer review, it is quite evident that Frontline’s proposal will cost both the taxpayers and public safety agencies money.”⁷² In particular, public safety commenters noted that the proposed network would not be constructed “for free” by the E Block licensee; it would be funded by fees paid by public safety. The reasonableness of these fees was called into question⁷³ — especially because the proposal would “force public safety users to participate” in the shared network and pay fees set by the E Block licensee in its capacity as a “nationwide monopoly.”⁷⁴

⁶⁹ NATOA Comments at 8-16;

⁷⁰ *Ex Parte* letter from John Blevins, counsel for Frontline, to Marlene H. Dortch, FCC Secretary, dated March 26, 2007, at 2.

⁷¹ Frontline Comments at 33 (stating that “Frontline’s plan . . . would ensure that the E Block licensee will fund the buildout of public safety’s nationwide, interoperable broadband network . . . at no cost to public safety or taxpayers”).

⁷² NATOA Comments at 9-10.

⁷³ NATOA Comments at 10; SF Comments at 3; Orange County Comments at 2.

⁷⁴ *See* SF Comments at 3; Orange County Comments at 2; *see also* AT&T Comments at 10-11; MetroPCS Comments at 9-10, 71-75; Verizon Wireless Comments at 44 (noting exclusive nature of proposal); Cyren Call Comments at 13 (noting the lopsided negotiating situation in favor of the commercial E block licensee under Frontline’s proposal).

The ability to recoup the fees necessary to support the combined network also was questioned because many public safety entities may not utilize the system.⁷⁵ As noted by NATOA, the proposal “assumes that public safety entities nationwide would subscribe to the new network and be willing to give up their existing – and expensive – networks to pay for the use of an untested system.”⁷⁶ Many communities already have begun to construct networks to solve their communications needs.⁷⁷ New York City awarded a contract to Northrop Grumman to build a broadband wireless public safety network⁷⁸ and the National Capital Region was recently granted a waiver to build a similar network to serve the Washington, D.C.⁷⁹ Thus, not all public safety agencies would necessarily want to share the cost of Frontline’s proposed network.

B. Access to Additional Spectrum

Another public interest benefit touted by Frontline is that its proposal would give public safety access to additional spectrum — priority access to the new commercial E block. As demonstrated in AT&T’s comments, additional spectrum is not needed by public safety at this time.⁸⁰ As a result, giving public safety priority access to commercial

⁷⁵ SF Comments at 3; Orange County Comments at 2.

⁷⁶ NATOA Comments at 11.

⁷⁷ See SF Comments at 5; Orange County Comments at 3.

⁷⁸ See Press Release, Northrop Grumman Information Technology, “Northrop Grumman Wins \$500 Million New York City Broadband Mobile Wireless Contract,” (Sept. 12, 2006); Donny Jackson, “New York City awards \$500 million wireless contract to Northrop Grumman,” MOBILE RADIO TECHNOLOGY (Sept. 15, 2006).

⁷⁹ See *Request of National Capital Region for Waiver of the Commission’s Rules to Allow Establishment of a 700 MHz Interoperable Broadband Data Network*, WT Docket No. 96-86, *Order*, DA 07-454 (Jan. 31, 2007).

⁸⁰ AT&T Comments at 9; see also AT&T Comments in PS Docket 06-229 at 7-14 (filed Feb. 26, 2007); Jon M. Peha, Professor of Electrical Engineering and Public Policy, Associate Director of the Center for Wireless and Broadband Networking, Carnegie Mellon University, *How America’s Fragmented Approach to Public Safety Wastes Money and Spectrum*, Abstract presented at 33rd Telecommunications Policy Research Conference, at 13-14 (Sept. 2005) (finding that, given current technologies, public safety communications needs

(continued on next page)

spectrum capacity is at best a questionable basis for making an allocation decision. This conclusion was echoed by the public safety community, with some commenters noting that the lack of available spectrum had traditionally been a concern, but was potentially remedied by the 700 MHz spectrum recently allocated to public safety and efforts already underway to utilize that spectrum.⁸¹ As noted by Orange County:

The FCC has graciously considered public safety needs as it cleared the 700 MHz band and is providing the greatest allocation of voice 700 MHz channels in history to improve local and regional public safety emergency communications and interoperability. This available voice spectrum (February 2009) will provide voice interoperability in the greater Orange County, California Area, allowing effective communications with our public safety partners, including transportation security partners, and allow relief for congested channels after many years without new spectrum availability.⁸²

Moreover, many public safety entities have already undertaken efforts to build interoperable data and broadband networks to address their communications needs with existing spectrum allocations.⁸³

(footnote continued)

could be *satisfied through 2010 with an allocation of only 8.3 MHz*); Peter Cramton, Thomas S. Dombrowsky, Jr., Jeffrey A. Eisenach, Allan Ingraham, and Hal J. Singer, "Improving Public Safety Communications: An Analysis of Alternative Approaches," Criterion Economics, L.L.C. at 29 (Feb. 6, 2007).

⁸¹ Orange County at 3; SF Comments at 5.

⁸² Orange County Comments at 1-2.

⁸³ See Press Release, Northrop Grumman Information Technology, "Northrop Grumman Wins \$500 Million New York City Broadband Mobile Wireless Contract," (Sept. 12, 2006); Donny Jackson, "New York City awards \$500 million wireless contract to Northrop Grumman," MOBILE RADIO TECHNOLOGY (Sept. 15, 2006); *Request of National Capital Region for Waiver of the Commission's Rules to Allow Establishment of a 700 MHz Interoperable Broadband Data Network*, WT Docket No. 96-86, *Order*, DA 07-454 (rel. Jan. 31, 2007); see also New York City Comments at 8 (describing efforts to build a broadband network); Fargo Comments at 1 (noting efforts to build a 700 MHz network); Nevada (Region 27) 700 MHz Planning Committee Comments at 2 (same).

The City and County of San Francisco also indicated that construction of a shared public/private network might actually *reduce* spectrum availability due to interference issues caused by sharing between commercial and public safety entities:

The past FCC decisions that allowed sharing of spectrum, such as demonstrated with the Nextel issues in the 800 MHz band, have proven to be costly, problematic, and created first responder safety concerns due to interference. The Commission's Proposal begs the question: have we explored the issue of sharing spectrum in the 700 MHz band fully or are we creating the same problem with the same thinking as before? Although there are many opportunities for public-private partnerships in disaster coordination, this one has dire consequences if implemented as proposed⁸⁴

Secondary access to a 10 MHz (or 12 MHz, under Frontline's revised band plan) commercial system simply is not necessary at this time.

C. Buildout

Frontline claims that its proposal would quickly benefit public safety because of its accelerated buildout schedule.⁸⁵ Frontline's buildout schedule has been a moving target, constantly changing as more and more "goodies" are added to lure potential supporters.⁸⁶ The buildout schedule *du jour* calls for coverage of "75% of the U.S. population (or

⁸⁴ SF Comments at 4; *accord* MetroPCS Comments at 74 (citing 800 MHz rebanding process as an example of why negotiations with a single commercial provider will not succeed); Union Telephone Comments at 15 (same).

⁸⁵ See Frontline Comments at 40-41.

⁸⁶ Under its original proposal, the E block licensee would have been required to build a network covering only 25% of the *geographic area* of the United States within four years, 50% within five years, and 75% within ten years; later it changed to population coverage, which allowed it to cite higher percentages — 75% of the U.S. *population* covered within four years, 95% within seven years, and 98% within ten years. See MetroPCS Comments at 64.

equivalent geographic coverage)” within four years, 95% within seven years, and 99% within ten years.⁸⁷

Frontline’s comments do not indicate how the high levels of coverage it proposes can be timely achieved in an economically viable way by a “small business” that describes itself as a “new entrant,” has never built a wireless network, and has not demonstrated how it would finance this expensive network. No business case is laid out — Frontline has said (without any backup documentation) that it estimates the system cost to be \$10-15 billion,⁸⁸ but has provided no cost information, revenue projections, or milestones toward profitability. The Commission is being asked to earmark 10 or even 12 MHz of commercial spectrum nationwide for the E Block licensee as well as the 12 MHz of public safety broadband spectrum on the basis of buildout targets that may have no basis in reality. “Trust us” is not a good enough basis for such a decision. The Commission should not be gambling with the nation’s public safety infrastructure.

If, however, the Commission determines that a public/private partnership should be created for the construction and maintenance of a joint network, it must establish clear obligations *prior to the auction* that will ensure the E Block licensees⁸⁹ deliver the broadband

⁸⁷ Frontline Comments at 40. It never explains what it means by “equivalent geographic coverage.” *See id.* at 40 n.59.

⁸⁸ *Ex Parte* letter from John Blevins, counsel for Frontline, to Marlene H. Dortch, FCC Secretary, dated March 26, 2007, at 2.

⁸⁹ In its Comments, AT&T proposed that if a E Block is created in the Upper 700 MHz Band, it should be licensed by REAG. *See* AT&T Comments at 5. REAG licensing should be used for any E Block created out of the D Block. Accordingly, we refer to licensees, above.

public safety services for which the public safety spectrum has been allocated.⁹⁰ At a minimum, the Commission should:

- Seek comment from public safety organizations regarding the *minimum* set of technical criteria that must be incorporated into the joint network to ensure network reliability during emergency situations. These criteria would be incorporated in the rules as a license condition;⁹¹
- Establish specific public safety loading or participation requirements on the E block licensees. For example, establish a percentage of public safety entities that must be utilizing the joint network by specific dates – *i.e.*, employ public safety participation as a supplement to any traditional population or geographic buildout requirement. This will give the E block licensees a needed incentive to negotiate reasonable terms with Public Safety;
- Specify that a failure to meet the aforementioned loading requirements would result in automatic termination of the relevant E Block license and of that E Block licensee’s right to operate the public safety network, subject to an appropriate transition of that network to another operator;
- Establish a different and more specific renewal standard for the E Block licensees than for other commercial licensees. The traditional renewal expectancy standard is inadequate in light of the unique public safety requirements imposed on the E Block licensees.

VI. BAND PLAN

Commenters supported a wide variety of band plans. After review of the comments, AT&T continues to support the band plan it proffered. Of particular concern to AT&T is the need to have a guard band between the high power Lower 700 MHz C Block

⁹⁰ See Verizon Wireless Comments at 58-60. The Association of Public-Safety Communications Officials (“APCO”) proposed an approach to a shared public safety-private network that addresses some of the concerns voiced by many about the Frontline proposal. See APCO Comments at 10-22. The APCO “conditional auction” proposal would give the public safety community greater control over the development and deployment of the public safety network by providing the national broadband public safety licensee with the *option* of entering into an agreement with the E Block licensee, if agreement can be reached on terms, rather than being forced to enter into an agreement through mandatory Commission arbitration. If no agreement is reached, the APCO proposal calls for the E Block spectrum to be re-auctioned. It also provides for continuation of service if the E Block licensee’s business fails. APCO’s proposal would have a national public safety licensee establish the requirements for the public safety network prior to the auction.

⁹¹ Verizon Wireless Comments at 58-60.

and the Upper 700 MHz C Block. Due to the potential for interference, a guard band is desirable between spectrum bands, particularly when there are different types of services and differing power limits operating in the two bands. The C Block in the Upper 700 MHz band will likely be used for two-way voice/data communications while the C Block in the Lower 700 MHz band could be used for two-way or one-way services including broadcast services allowed to transmit up to 50 kW ERP. As such, the A Block guard band continues to be needed to protect from interference.

The interference in this case can generally be split into two categories: out of band emissions (“OOBE”) and receiver overload or blocking. For example, interference due to OOBE could occur from a transmitter operating in the Lower 700 MHz Band that produces signals outside of its intended spectrum block that fall into the Upper 700 MHz Band. Similarly, a transmitter in the Upper 700 MHz Band could produce OOBE that fall into blocks in the Lower 700 MHz Band. In either case, filtering must be used at the transmitter to help reduce emissions that fall outside of the intended pass band, and a guard band helps to ensure that the OOBE are reduced within reasonable filter designs.

In some cases, for example the PCS spectrum band, there are no explicit guard bands between each of the spectrum blocks, and the operators have designed their systems so that the interference from OOBE is kept to a minimum. This is due to the fact that in many cases the various operators using adjacent spectrum blocks are operating on the same cell towers, and this tends to minimize the effects of OOBE. In the case of the 700 MHz bands, however, this type of operation cannot be assumed, especially in the case of an operator in the Lower 700 C Block using its spectrum for a high-power broadcast service, since it is unlikely that the operator in the Upper 700 MHz C Block would be using the

same towers as a broadcast system. Furthermore, under the current rules the OOB from transmitters operating in both the Lower and Upper 700 MHz C Blocks are slightly relaxed in the 100 kHz immediately outside of the licensed spectrum blocks. To reduce the potential interference problems from OOB, it is highly recommended to keep the existing guard band between the Lower and Upper 700 MHz Bands. Without the guard band there could be areas where a mobile device will experience an unacceptable amount of interference, or noise-rise, when located in the proximity of a transmitter in the other band.

The second type of interference is receiver overload, also referred to as receiver blocking. In this case, the victim receiver is unable to operate successfully due to a high powered signal located outside of its own pass band. This would be the case for a mobile attempting to receive its intended signal in the Upper 700 MHz C Block when in the presence of a strong signal being transmitted in the Lower 700 MHz C Block. Since this type of interference can only be mitigated by filtering in the victim receiver the guard band between the Lower and Upper 700 MHz bands remains necessary to help ensure that mobile services can be deployed successfully in the Upper 700 MHz band. Note also that both intermodulation and cross modulation can also occur in a similar manner and would require filtering within the victim receiver. Here again, the presence of the guard band will help to mitigate these sources of interference and will help to reduce areas where unacceptable interference could occur due to proximity of a (potentially high powered) transmitter.

The mobile industry has long experience with these interference issues in the cellular and PCS bands, and has evolved handset designs and operational models to mitigate these issues. However, particularly in the case of the Lower 700 MHz to Upper 700 MHz interface, the power differences are dramatic. In addition the propagation at 750 MHz is

approximately 9 dB better than at 1900 MHz. Thus when considering both the OOB and overload problems, the area of operation in which performance would be impaired increases. Filters which meet the OOB requirements would likely provide an additional 8 dB of attenuation within the 1 MHz A Block guard band. This attenuation nearly offsets the propagation difference, and results in interference performance levels much closer to those experienced in deployed CMRS systems. Thus, keeping the A Block guard band located at 746 MHz can help mitigate interference, thereby maintaining a reasonable and cost effective handset design for operation in the Upper 700 MHz C Block. Conversely, it also reduces the OOB and overload potential for Upper 700 MHz base stations into handsets operating in the high power regime of the Lower 700 MHz C Block. The interference zones caused by the upper 700 MHz C band would be smaller than those caused by the lower 700 MHz C band base stations (due to power levels), but there are many more base stations in the upper 700 MHz band. Thus the guard band is necessary to protect the services of each of these bands.

Respectfully submitted,

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