

**Before the  
Federal Communications Commission  
Washington, DC 20054**

In the Matter of )  
 )  
Technical and Operational Feasibility of ) PS Docket No. 06-229  
Enabling Flexible Use of the 700 MHz Public )  
Safety Narrowband Allocation and Guard )  
Band for Broadband Services )

**COMMENTS OF AT&T, INC.**

AT&T Inc. (“AT&T”) files these Comments in response to the Public Notice (“*Notice*”) released by the Federal Communications Commission (the “Commission”) pertaining to the feasibility of allowing for flexible use of the 700 MHz public safety narrowband spectrum.<sup>1</sup>

**I. INTRODUCTION AND SUMMARY**

In 2007, after a thoughtful and comprehensive analysis, the Commission reconfigured the 700 MHz band to provide for public safety applications. Specifically, the new public safety band plan redesignated the public safety wideband spectrum for broadband use and consolidated existing narrowband channels to the upper half of the public safety spectrum.<sup>2</sup> In between the broadband and narrowband segments, the Commission allocated a 1 MHz Guard Band to reduce the potential for interference. A public/private partnership between the Upper 700 MHz D-Block licensee and the public safety broadband licensee would further facilitate broadband applications for public safety.

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<sup>1</sup> Technical and Operational Feasibility of Enabling Flexible Use of the 700 MHz Public Safety Narrowband Allocation and Guard Band for Broadband Services, PS Docket No. 06-229, *Public Notice* (rel. Sept. 28, 2010) (“*Notice*”).

<sup>2</sup> Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, et al., PS Docket No. 06-229, *Second Report and Order*, 22 FCC Rcd 15289 (2007) (“*Second Report and Order*”).

Since that time, the D-Block auction failed and the public/private partnership never came to pass. Members of the public safety community and others, including AT&T, concerned that another auction of the D-block will fail to provide the benefits initially contemplated and further delay deployment of a public safety broadband network, now advocate for the reallocation of the D-Block spectrum directly to public safety. Opponents of reallocation of the D-Block continue to favor a reauction of the block, arguing that public safety does not need the additional capacity that a D-Block reallocation would provide. Nevertheless, the bevy of proposals they have advanced for public safety to offload traffic on other spectrum bands suggest the truth—that public safety broadband spectrum use will be constrained without the additional capacity that the D-Block would provide. The latest proposal, advocated by T-Mobile, is to allow the flexible use of the public safety narrowband channels for broadband or narrowband operations.<sup>3</sup> In this Notice, the Commission seeks comment on the feasibility of such an option.

AT&T opposes any effort to impinge on the public safety narrowband channels with broadband operations. Although the deployment of a broadband public safety network will substantially improve the ability of public safety to engage in interoperable communications, it can do so without harming public safety narrowband communications. A broadband network will be unable to meet all of public safety's needs in the foreseeable future. Public safety currently relies on narrowband spectrum for many mission critical activities, such as one-to-many communications, and will continue to do so for the foreseeable future. Broadband cannot currently meet that need. Attempts to use narrowband channels to provide both broadband and narrowband applications would merely result in significant interference to both broadband and narrowband networks, not a small risk considering the critical value of those communications. It

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<sup>3</sup> Dennis A. Roberson, *Technical Analysis of the Proposed 700 MHz D-Block Auction*, filed as an attachment to Letter from Thomas J. Sugrue, Vice President Government Affairs, T-Mobile USA, Inc., to Marlene H. Dortch, Secretary, FCC, PS Docket 06-229 (Aug. 24, 2010).

could also require public safety to choose between broadband and narrowband applications, not a choice that was envisioned when a nationwide interoperable voice and data network was planned.<sup>4</sup> In short, allowing broadband to encroach into the 700 MHz narrowband public safety spectrum could reduce the amount of usable 700 MHz narrowband public safety spectrum. To the extent that this occurs, it would strand substantial investments already made by municipalities in narrowband systems.

## II. DISCUSSION

### **A. Flexible Use of the Narrowband There Are Significant Interference Issues That Cannot Be Easily Solved.**

The Commission should not allow flexible use of the narrowband spectrum for broadband because of the significant risk of interference that would occur to both broadband and narrowband applications in areas where the band is shared. In the *Second Report and Order*, the Commission explained the interference problem arising from the operation of cellular architecture adjacent to a narrowband network:

[T]he significant interference problems arising from the adjacency of 700 MHz commercial and public safety spectrum are further compounded by the conflicting network architectures typically employed by public safety narrowband operations and commercial systems. Cellular systems, by design, are composed of large numbers of base stations within a relatively small geographic area. Public safety systems, on the other hand, are typically composed of high powered base stations operating at a few sites that provide coverage to a large geographic area. This mix of network architectures often result in an interference scenario—sometimes referred to as “near-far”—that arises when a cellular system operates in close proximity to a public safety system. In the near-far scenario, interference occurs where a public safety mobile/portable unit receives a stronger signal from a nearby, adjacent channel commercial base station rather than from the desired, distant public safety transmitter. The Commission found it necessary to reband the 800 MHz band to resolve this type of “near-far” interference, which, in that band, was “caused by a fundamentally incompatible mix of two types of communications systems: cellular-architecture multi-cell

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<sup>4</sup> Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010, PS Docket No. 06-229, *Report and Order and Further Notice of Proposed Rulemaking* (April, 27, 2007).

systems— used by ESMR and cellular telephone licensees—and high-site non-cellular systems—used by public safety, private wireless and some SMR licensees . . . .<sup>5</sup>

The 700 MHz public safety broadband network will be designed with a cellular architecture, similar to a commercial network. Thus, operating a public safety broadband network in spectrum adjacent to narrowband spectrum will present these very same interference issues, except that the interference could occur to both broadband and narrowband operations and such interference could endanger life or property.

Indeed the Commission specifically considered the potential for interference between broadband and narrowband operations and designated 1MHz Guard Bands between those bands to minimize such interference. But for the interference potential, there would be no need for the Guard Bands. The Commission further concluded that distancing the narrowband segment from the broadband segment would minimize the potential for interference between the bands.<sup>6</sup> Based upon the Commission’s desire to remove this interference concern for a public safety broadband licensee seeking to deploy a nationwide network, the Commission also consolidated all narrowband operations to the upper part of the 700 MHz public safety band, away from future broadband operations: “It is important that the . . . Public Safety Broadband Licensee not be constrained by the presence of narrowband operations in the public safety broadband allocation with regard to implementing a build-out plan for the nationwide broadband network.”<sup>7</sup> The interference concerns that drove the Commission’s decisions in 2007 are no less significant now and the Commission should not deviate from its protection of broadband and narrowband operations by allowing flexible use of the narrowband allocation.

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<sup>5</sup> *Second Report and Order* at 15386-87, note 606 (quoting from *Improving Public Safety Communications in the 800 MHz Band*, WT Docket No. 02-55, *Report and Order*, 19 FCC Rcd 14969, 14972-73 ¶ 2 (2004)).

<sup>6</sup> *Second Report and Order* at 15409, ¶329.

<sup>7</sup> *Id.* at 15410, ¶332.

**B. Public Safety Will Need Narrowband Spectrum for Mission Critical Activities for the Foreseeable Future.**

When the Commission allocated spectrum for broadband use, enabling many critical applications for public safety personnel, such as live video, downloading diagrams and blueprints, downloading mug shots and AMBER Alert photos, it did not do so at the expense of narrowband use. The Commission consolidated the existing narrowband allocations to the upper half of the 700 MHz public safety band, thereby recognizing that spectrum dedicated to narrowband applications would continue to be necessary.<sup>8</sup> The situation has not changed. For the foreseeable future, public safety will continue to need narrowband spectrum for mission critical activities. Broadband just cannot, and will not for many years, meet all public safety voice and data needs. And, there is no current suitable replacement for the narrowband spectrum. Therefore, the Commission should take no action that would risk cannibalizing the narrowband allocation for the benefit of broadband use.

The dedicated narrowband and broadband spectrum bands would allow public safety to deploy interoperable voice and data networks and, eventually, to incorporate voice and data applications into a single device. Allowing flexible use of the narrowband spectrum could compromise this interoperability goal not only by causing potential interference between the broadband and narrowband uses, but also by requiring certain communities to choose between broadband and narrowband applications. Public safety should not be forced into making an election between an interoperable voice network, an interoperable data network, or a combined, yet compromised, voice and data network. A policy that requires such choices would frustrate the goals of the Commission when it adopted the 700 MHz public safety band plan and undermine the strong needs of public safety community for nationwide, interoperable voice and data networks.

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<sup>8</sup> *Supra* n.6.

### **C. Allowing the Flexible Use of Narrowband Channels Would be Fiscally Irresponsible.**

The Commission's designation of separate spectrum bands for broadband and narrowband use<sup>9</sup> makes it possible for public safety to overlay a 700 MHz broadband network on a 700 MHz narrowband network, combining the strengths of both technologies to deliver a unified communications infrastructure that can be shared across cooperating public safety agencies. As a result of this potential, many public safety organizations have begun to meet their interoperability needs by deploying systems using narrowband channels. As originally envisioned, the relocation of incumbent public safety systems to the new 700 MHz narrowband channels would be funded by the Upper 700 MHz D-block licensee.<sup>10</sup> Instead, the failure of the D-block auction left public safety agencies without a solid plan to fund narrowband relocation. This capital investment in narrowband systems runs in the millions.<sup>11</sup>

Yet, opponents of D-block reallocation would have this Commission take actions that completely ignore the incumbent 700 MHz public safety users. Just a few years after the Commission adopted a comprehensive public safety narrowband plan, which implementation is just beginning, allowing the flexible use of the narrowband channels for broadband applications would force public safety organizations to face the choice of accepting the potential interference from broadband operations within the band, incur additional cost to implement an as yet undevised means of minimizing that interference, and/or sacrificing narrowband operations for

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<sup>9</sup> The Commission set the transition deadline for narrowband operations in Channels 63 and 68 to the public safety narrowband allocation as the date of the DTV transition. *Supra* n.7.

<sup>10</sup> *Second Report and Order* at 15336-37, ¶121.

<sup>11</sup> In 2008, Motorola reported an estimated cost of over \$70 million to relocate incumbent users to new public safety narrowband channels. *700 MHz Narrowband Relocation* (Nov. 13, 2008), attached to *Ex parte* letter from Steve B. Sharkey, Senior Director, Regulatory and Spectrum Policy, Motorola Inc., to Marlene H. Dortch, Secretary, Federal Communications Commission (Nov. 19, 2008).

the sake of meeting broadband capacity needs. This would be fiscally irresponsible, potentially imposing costs on tax-payer funded public organizations that can least afford to bear them. It is also unnecessary with the presence of a viable option to reallocate the D-block to public safety.

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Respectfully submitted,

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