

**Before the  
Federal Communications Commission  
Washington, DC 20554**

In the Matter of	)	
	)	
Request by the City of Tucson, Arizona	)	PS Docket No. 06-229
For Waiver of the Commission's Rules to	)	
Deploy a 700 MHz Public Safety	)	
Interoperable Mobile Broadband Network	)	

**REQUEST FOR WAIVER**

Carl Drescher  
IT Administrator  
Information Technology Department  
City of Tucson  
P.O. Box 27210  
Tucson, Az. 85726-7210  
(520) 791-4747  
[Carl.Drescher@tucsonaz.gov](mailto:Carl.Drescher@tucsonaz.gov)

Joseph Jakoby  
IT Manager  
Communications Engineering  
Information Technology Department  
City of Tucson  
P.O. Box 27210  
Tucson, Az. 85726-7210  
(520) 837-6054  
[Joe.Jakoby@tucsonaz.gov](mailto:Joe.Jakoby@tucsonaz.gov)

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## REQUEST FOR WAIVER

### **I. SUMMARY OF REQUEST**

Pursuant to Section 47 C.F.R. § 1.925(b)(3), the City of Tucson respectfully submits this Request for Waiver to the Federal Communications Commission ("Commission") to waive any Commission rules that would prohibit the City of Tucson from using the public safety broadband spectrum in the 700 MHz band to deploy a metropolitan mobile public safety broadband data network.<sup>1</sup>

The City of Tucson links its optical fiber network to multiple jurisdictions to maximize public safety and public service oriented communications and promote interoperability. By working together with other agencies, the City of Tucson fosters regional efficiencies that ultimately better serve our citizens. The City is ready to begin design and construction of a public safety broadband data network to more effectively support the needs of public safety.

Granting the requested waiver would allow the City of Tucson to move forward with plans to deploy a wireless broadband network in the public safety portion of the 700 MHz band to replace its aging narrowband 800 MHz data networks and provide a wireless extension of its optical fiber network. The result would be the accelerated availability of a wireless broadband public safety data network serving over 230 square miles and almost 1,000,000 citizens in the Tucson metropolitan area, which would strongly serve the public interest and support the Commission's goals. Accordingly, the City of Tucson seeks a waiver of the Commission's rules to grant the authorization to use the public safety 700 MHz broadband spectrum (763-768/793-798 MHz) under an agreement with the Public Safety Spectrum Trust ("PSST"), the nationwide licensee of the spectrum.

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<sup>1</sup> E.g. 47 C.F.R. § 27.1330 and § 90.143. These rules provide the D-Block licensee with the "exclusive right to build and operate the Shared Wireless Broadband Network. Early build-out by a public safety entity is only allowed in limited circumstances that *require* the participation of a currently non-existent D Block Licensee. The Commission should waive these rules and any others it or other Petitioners find to be an impediment to early build out in the 700 MHz public safety broadband spectrum.

This waiver would enable the City of Tucson and partners to begin the planning and implementation of a regional public safety wireless broadband network to serve first responders. Comments filed by the PSST recommend that the FCC should, “address the Petitions as soon as possible and not wait until the broader 700 MHz D Block rulemaking proceeding is complete”.<sup>2</sup>

## **II. BACKGROUND**

### **A. City of Tucson Optical Fiber Network**

The City of Tucson and its network partners have a strong history of promoting interoperability in the Tucson metropolitan area. For the past several years, the City has funded, deployed and is operating a mission-critical optical fiber network. In addition, the City is partnering with Pima County to install a Countywide 800 MHz P25 interoperable voice radio system. The optical fiber network is the data backbone for both the wired and wireless networks.

Due to the bandwidth limitations, the 800 MHz data systems used by first responders have been providing only the most basic mission critical data needs such as Computer Aided Dispatch (CAD) and Automatic Vehicle Location (AVL). The aging City of Tucson Police Department’s 800 MHz mobile data system has become obsolete and is in desperate need of replacement. The manufacturer of the police department’s infrastructure and mobile subscriber equipment no longer supports the equipment.

Should the requested waiver be granted, the City of Tucson has the resources to begin the design of a regional 700 MHz broadband interoperable data network that will utilize the 10 MHz of public safety broadband spectrum. The granting of this waiver would allow the City of Tucson to begin to plan the deployment of 700 MHz Broadband LTE system. The LTE technology has been endorsed by the National Public Safety Telecommunications Council (NPSTC), the Association of

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<sup>2</sup> See Comments of Public Safety Spectrum Trust Corporation (PSST) filed Public Safety and Homeland Security Bureau Seeks Comment on Petitions for Waiver to Deploy 700 MHz Public Safety Broadband Networks. Public Notice 24 FCC Rcd. 10814 (re I. Aug. 14, 2009)

Public Safety Communications Officials - International (APCO) and the Public Safety Spectrum Trust (PSST).

Finally, the success and effectiveness of the City of Tucson program hinges on the ability to provide not just voice service on the narrowband spectrum, but also provide robust wireless broadband data service for the metropolitan area's first responders and supporting agencies. Availability of a 700MHz wireless public safety broadband system is a critical need for the City of Tucson region. The city sees a wireless broadband network as a natural extension of the metropolitan optical fiber network.

### **B. The Network Partners**

The City of Tucson network partners consist of, but are not limited to, the Arizona Department of Public Safety, Pima County, University of Arizona, Pima Community College, Tucson Unified School District, City of South Tucson, and the Town of Oro Valley. The City of Tucson alone covers over 230 square miles and represents almost 600,000 citizens. The City has interoperability agreements in place with numerous other area public safety entities and Federal agencies.

Voice and data communications are an integral part of this function. The City of Tucson is dedicated to regional cooperation in building and operating interoperable public safety communications infrastructure to provide the highest feasible level of prevention, protection, response and recovery from acts of terrorism and other catastrophic events in the region.

### **C. Relevant Commission Actions**

The Commission has repeatedly noted the many potential benefits of broadband service to public safety, including: allowing police officers to exchange mug shots, fingerprints, photographic identification, and enforcement records; allowing firefighters to have access to floor and building plans and real-time medical information; providing high resolution photographs and real-time video

monitoring of crime scenes to incident command centers.<sup>3</sup> In the *Second Report and Order*, the Commission adopted rules that would establish a public private partnership to control the upper portions of the 698-806 MHz band ("700 MHz Band").<sup>4</sup>

The rules provided that the winning bidder of the commercial license in the Upper 700 MHz D Block (758-763/788-793MHz) ("D Block") would enter into a public-private partnership with the nationwide licensee of the public safety broadband spectrum (763-768/793-798 MHz) ("Public Safety Broadband Licensee") to construct a nationwide broadband network, which would share both the commercial D Block and public safety broadband spectrum. The Commission concluded that the public-private partnership would serve its objective "to promote the rapid deployment of a nationwide, interoperable, broadband public safety network that was robust, cost effective, spectrally efficient, and based on a flexible IP-based, modem architecture".

In particular, the Commission found that this approach would address "the most significant obstacle to constructing a public safety network, the limited availability of public funding" and would provide "the most practical means of speeding deployment" of the desired nationwide, interoperable voice and public safety broadband network. Thus, two of the Commission's key goals in adopting the public-private partnership were overcoming financial

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<sup>3</sup> *E.g.* Report to Congress on the Study to Assess the Short-Term and Long-Term Needs for Allocations of Additional Portions of the Electromagnetic Spectrum for Federal, State, and Local Emergency Response Providers, WT Docket No. 05-157 (Dec. 16, 2005) (recognizing that broadband communications applications offer the public safety community a number of benefits, including video surveillance, real-time text messaging and e-mail, high resolution digital images and the ability to obtain location and status information of personnel and equipment in the field.

<sup>4</sup> See Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, WT Docket No. 06-150, Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94102, Section 68.4(0) of the Commission's Rules Governing Hearing Aid-Compatible Telephones, WT Docket No. 01309, Biennial Regulatory Review -- Amendment of Parts I, 22, 24, 27, and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services, WT Docket 03-264, 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, Declaratory Ruling on Reporting Requirement under Commission's Part I Anti-Collusion Rule, WT Docket No. 07-166, Second Report and Order, 22 FCC Red 15289 (2007)(Second Report and Order)

hurdles through the utilization of cost efficiencies and enabling public safety agencies to gain the considerable benefits of a broadband network as quickly as possible.

In the auction of commercial 700 MHz licenses that concluded March 18, 2008, known as Auction 73, bidding for the D-Block license did not meet the applicable reserve price of \$1.33 billion. Pursuant to the Commission's rules, there was no winning bid for the D-Block license. In response to the failed auction, the Commission issued the Third Further Notice of Proposed Rulemaking ("Third Further Notice") seeking comment on proposed rules that would maintain the public-private partnership and re-auction the D Block with a lowered reserve price and reduced build out and service requirements.<sup>5</sup> However, most notably, the Commission proposed to modify its auction framework to allow entities to bid for either a single nationwide license or 58 individual licenses on a regional basis. In the Third Further Notice the Commission recognized "that both nationwide and PSR area licenses have advantages that could help achieve the public interest goal of establishing a commercially viable interoperable public safety broadband network on a nationwide basis." Specifically the Commission recognizes that "regional licensing could lead to enhanced build-out and faster deployment to less populated, rural areas" and "could be particularly responsive to the unique needs of state, regional, and local public safety agencies." Furthermore, the Commission recognizes that even under a regional licensing framework there can be sufficient measures put in place to ensure nationwide interoperability.

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<sup>5</sup> See Service Rules for the 698-746, 747-762 and 777-792 MHz Bands; Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band, WT Docket No. 06-150 and PS Docket No. 06-229, Third Further Notice of Proposed Rulemaking, FCC 08-230 (rel. Sept, 25, 2008) ("Third Further Notice")

Recently the Commission issued a Public Notice<sup>6</sup> requesting comment on fourteen other Petitions for Waiver to deploy in the 700 MHz public safety broadband spectrum.<sup>7</sup> As recognized by the Commission in its Public Notice, Petitioner's have committed to working with the Commission to provide public safety entities access to this vital spectrum, while ensuring deployments are interoperable and consistent with the future national broadband network.<sup>8</sup>

In the Petitions for Waiver, the City of Tucson public safety entities have demonstrated an immediate need for access to the 700 MHz public safety broadband spectrum.<sup>9</sup> The importance of access to this spectrum is underscored by support in comments submitted in response to the Public Notice by numerous public safety organizations and the fact that even in a time of economic uncertainty many state and local governments stand ready to invest funds and leverage existing assets to deploy networks in the 700 MHz public safety broadband spectrum.<sup>10</sup>

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<sup>6</sup> See Public Safety and Homeland Security Bureau Seeks Comment on Petitions for Waiver to Deploy 700 MHz Public Safety Broadband Networks, Public Notice, 24 FCC Red. 10814 (rel. Aug. 14, 2009) ("Petitions for Waiver Public Notice")

<sup>7</sup> See City of Boston Amended Request for Waiver, PS Docket No. 06-229 (filed May 28,2009) (Boston Amended Petition); City and County of San Francisco, City of Oakland, City of San Jose Request for Waiver, PS Docket No. 06-229 (filed May 28,2009) (Bay Area Amended Petition); State of New Jersey Petition, PS Docket No. 06-229 (filed Apr. 3, 2009) (New Jersey Petition); City of New York Petition for Waiver, PS Docket No. 06-229 (filed June 8,2009) (New York City Petition); District of Columbia Request for Waiver, PS Docket No. 06-229 (filed June 26, 2009) (DC Petition); New York State Request for Waiver, PS Docket No. 06-229 (filed June 30, 2009) (NYS Petition); New EA, Inc. dba Flow Mobile Request for Waiver, PS Docket No. 06-229 (filed July 7, 2009) (Flow Mobile Petition); City of Chesapeake, Virginia, Request for Waiver, PS Docket No. 06-229 (filed July 8, 2009) (Chesapeake Petition); City of San Antonio, Texas, Petition for Expedited Waiver, PS Docket No. 06-229 (filed July 10, 2009) (San Antonio Petition); State of New Mexico, Petition for Expedited Waiver, PS Docket No. 06-229 (filed July 10, 2009) (New Mexico Petition); North Dakota Amended Petition for Waiver, PS Docket No. 06-229 (filed Aug. 18,2009); Petition for Waiver of the City of Charlotte, North Carolina, PS Docket No. 06-229 (filed Aug 4., 2009) (Charlotte Petition); Request for Waiver State of Hawaii, PS Docket No. 06-229 (filed Aug.12,2009) (Hawaii Petition); Petition for Waiver Iowa Statewide Interoperable Communications System Board, PS Docket No. 06-229 (filed Oct. 15,2009) (Iowa Petition).

<sup>8</sup> "Further, the Petitioners generally state they can deploy their broadband networks in advance of a resolution of the Commission's ongoing 700 MHz D Block proceeding, and that these deployments can be accomplished in a manner that may be integrated into any such network resulting from the Commission's rulemaking."

<sup>9</sup> See, e.g. Comments of the City and County of San Francisco, City of Oakland, and City of San Jose, Request for Waiver of the Commission's Rules to Allow Establishment of a 700 MHz Interoperable Mobile Public Safety Broadband Network, PS Docket No.06-229, at 6-7 (filed March 24,2009); Comments of the City of San Antonio, Texas, Request for Waiver of the Commission's Rules to Allow Establishment of a 700 MHz Interoperable Mobile Public Safety Broadband Network, PS Docket No.06-229, at 3-4 (filed July 10,2009); Comments of the City of Boston, Request for Waiver of the Commission's Rules to Allow Establishment of a 700 MHz Interoperable Mobile Public Safety Broadband Network, PS Docket No.06-229, at 8-10 (filed May 28, 2009).

<sup>10</sup> "Generally, each of the Petitioners suggests that is has sufficient funding in place or plans for funding to be secured, such that it could deploy a public safety broadband network. Petitioners assert that they can fund such a build out independently, while other assert that they would seek out commercial or other partners on their own." Petitions for Waiver Public Notice, *supra* note I, at 2.

The Commission can grant waiver petitions without inhibiting the current D-Block proceeding. In fact, granting the waiver requests at issue will move the Commission one step closer to achieving its goal of establishing a nationwide interoperable broadband wireless network for public safety.

**D. Uncertainty Regarding the Commission's Plan Is A Major Roadblock to 700 MHz Deployment.**

Even though the Commission has proposed revised rules that retain the Public-Private Partnership concept and set forth technical and operational rules to govern the Shared Wireless Broadband Network, it is unclear whether a future auction of the Upper 700 MHz D Block will be held, whether it would succeed, or whether it would result in nationwide coverage. As a result of the delays and uncertainties in establishing the Shared Wireless Broadband Network, first responders in the City of Tucson and across the country have been left without access to state-of-the-art communications capabilities, and the American public is put at risk each day that the initiation of public safety broadband services is delayed.

The uncertainty surrounding the 700 MHz public safety spectrum is a major roadblock to the region's urgent desire and need to build and operate a public safety broadband network. Urban areas such as the City of Tucson simply cannot afford to wait years for a nationwide carrier to build this network, particularly since there are no assurances that the final result will be sufficiently hardened, have sufficient capacity, and otherwise adequately serve the region's public safety needs during catastrophic events and disasters.

**III. THE COMMISSION SHOULD GRANT THE REQUESTED WAIVER TO ALLOW THE CITY OF TUCSON TO CARRY OUT ITS PLANS TO BUILD AN INTEROPERABLE 700 MHZ BROADBAND DATA NETWORK FOR PUBLIC SAFETY USERS.**

**A. Applicable Standard**

To obtain a waiver of the Commission's rules, a petitioner must demonstrate either that: the underlying purpose of the rule(s) would not be served or would be frustrated by application to the present case, and that a grant of the waiver would be in the public interest; or (ii) in view of unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome, or contrary to the public interest, or the applicant has no reasonable alternative. An applicant seeking a waiver faces a high hurdle and must plead with particularity the facts and circumstances that warrant a waiver. Although a successful waiver petition needs to satisfy only one of the two tests, the City of Tucson will demonstrate that this request satisfies both tests.

**B. Depriving the City of Tucson of Spectrum that It Needs for Its Broadband Data Network Would Not Serve the Commission's Goals and Would Frustrate the Public Interest.**

Under the first test, the waiver request should be granted if: (a) denying the City of Tucson the use of the broadband spectrum, in the hope that a national public-private partnership plan will succeed, would not serve the underlying purposes of the Commission's plan, and (b) granting the waiver would be in the public interest. This waiver request easily meets both requirements.

As demonstrated above, the underlying purpose of the Commission's plans for a public private partnership are to overcome the lack of funding for public safety broadband networks and to speed their deployment. Recognizing the enormous benefits of wireless broadband services for first responders, the Commission wisely wishes to have public safety broadband networks available for use as quickly as possible. However, with the failure of Auction 73 and the uncertainties regarding the Commission's plans, it is unclear when and how the Commission will ultimately meet its goals.

Whether or not the Commission revamps its general approach, it is clear that, with respect to the City of Tucson, the current plan does not serve the Commission's purposes. Denial of City of Tucson Waiver would frustrate the Commission's own articulated goals. The City of Tucson would still need to replace the current 800 MHz mobile data systems with a less than desirable low bandwidth system that would only meet the basic needs of our first responders with data applications such as CAD and AVL.

Instead of obtaining the benefits of a broadband network in the next several months, the City of Tucson would have to wait an unknown period of time for a commercial provider to build out a network with yet to be established specifications that may be neither cost effective nor adequate to meet the City of Tucson's needs.

The success and effectiveness of this project hinges on the ability to provide affordable, prioritized wireless broadband data service to the region's first responders, infrastructure partners and supporting agencies. Usage of commercial broadband wireless networks do not provide adequate coverage and have maintenance downtimes that are inconvenient to public safety users. Commercial broadband wireless service is expensive for the agencies and has shown more delays with the advent of increased private consumer web application usage.

Use of the 700MHz public safety broadband spectrum for an interoperable system that incorporates local operational control is a critical need for the agency partners of the City of Tucson.

Granting the waiver would unequivocally serve the public interest by providing the City of Tucson first responders enhanced abilities of to prevent and respond to all types of disasters. Critical first responder tools, such as instant access to criminal databases for suspect information, improved situational awareness using video technologies, and real time tracking of assets, firefighters and resources, would be available throughout the City of Tucson metropolitan area.

Moreover, the public interest benefits of granting the waiver would extend beyond the City of Tucson. The City of Tucson's Broadband LTE network would become both a test-bed and a showcase for the entire nation of the benefits to public safety from advanced wireless broadband.

The City of Tucson's regional public safety broadband network would be compatible with National standards and fully interoperable with a nationwide network or other regional networks meeting national standards. The City of Tucson is poised to begin design and phased construction of an interoperable public safety Long Term Evolution (LTE) broadband data network in the City of Tucson metropolitan area. Granting the requested waiver would allow the City of Tucson to move ahead with the design and construction of the public safety broadband data network serving the Eastern portion of Pima County. Granting of this waiver would greatly serve the public interest and supports the Commission's goals.

#### **IV. CONCLUSION**

The City of Tucson requests that the Commission grant a waiver that would allow the City to take advantage of a unique opportunity to construct a wireless broadband network at the same time the County builds a countywide interoperable P25 voice network. Though it is the intention for public safety representatives, through Congressional action, to seek complete licensing rights on both the D-Block and Public Safety Spectrum (758-768/788-798MHz), the City realizes that the FCC currently has authority to grant a waiver for the ten MHz of Public Safety Broadband Spectrum currently licensed to the PSST. To prevent this opportunity from passing, the City of Tucson respectfully request that the Commission act on this petition promptly, so that the Tucson metropolitan area and the nation can gain all of the public interest benefits enumerated in this request.

The City of Tucson stands ready to begin the design and deployment of a state-of-the-art interoperable LTE broadband data network. The City can accommodate its funding needs, without the participation of a commercial partner. The Commission would significantly advance the cause of

public safety in the region by the granting of this waiver request, allowing us to begin this work as soon as possible. This request satisfies the Commission's standards for a waiver grant. The City of Tucson respectfully requests that the Commission grant this waiver as promptly as possible.

Respectfully submitted,

Carl Drescher  
IT Administrator  
Information Technology Department  
City of Tucson  
P.O. Box 27210  
Tucson, Az. 85726-7210  
(520) 791-4747  
[Carl.Drescher@tucsonaz.gov](mailto:Carl.Drescher@tucsonaz.gov)

Joseph Jakoby  
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P.O. Box 27210  
Tucson, Az. 85726-7210  
(520) 837-6054  
[Joe.Jakoby@tucsonaz.gov](mailto:Joe.Jakoby@tucsonaz.gov)

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