

**Statement of
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Department of Information Technology and Telecommunications
City of New York**

**Before the
Committee on Commerce, Science and Transportation
United State Senate**

**Concerning
The 700 MHz Auction: Public Safety and Competition**

June 14, 2007

Chairman Inouye, Vice Chairman Stevens, Members of the Committee:

My name is Paul Cosgrave. I am Commissioner of New York City's Department of Information Technology and Telecommunications. I also serve as New York City's Chief Information Officer.

On behalf of the City of New York, thank you for the opportunity to appear before you today to discuss how the interests of public safety communications can be safeguarded in the upcoming 700 MHz band auctions.

Clearly, public safety communications continue to face significant challenges and uncertainties – even as the February 2009 deadline for transition of 700 MHz spectrum to public safety and commercial use fast approaches.

New York City appreciates the FCC's interest in potentially utilizing the upcoming 700 MHz spectrum auction to advance public safety communications, and this Committee's examination of the issue. At same time, however, we are deeply concerned about the potential consequences of any FCC decision that *mandates* establishment of a nationwide, public-private broadband network, which would be shared by public safety and commercial users.

Under the Frontline Wireless plan, a nationwide, public-private network would be deployed on 22 MHz of spectrum in the 700 MHz band – 12 MHz of which is currently allocated to public safety, and 10 MHz of which is scheduled for commercial auction. The auction winner would build a nationwide network, and negotiate with a newly established national public safety licensee over respective access rights. Commercial users would receive “secondary access” to the public safety segment, and public safety would receive “emergency access” to the commercial segment.

The City of New York certainly welcomes the establishment of rules that would make more spectrum available in the 700 MHz and other frequency bands for public-private partnerships on a *voluntary basis* – for both voice and data communications. However, we are concerned about the imposition of such a sweeping mandate, particularly after only a few months of consideration and debate. Ultimately, New York City's present view is that public-private partnerships should be optional. Furthermore, decisions to enter into such partnerships, along with coordination decisions, should take place at the

regional, rather than at the national level. And, finally, the Federal government must not dictate use of particular frequency bands or technologies.

The sudden emergence and popularity of proposals for public-private partnerships appears at least partly due to a misperception that the public safety community is unable to “solve” its own communications and interoperability needs. This is typically accompanied by the view that the Federal government has invested massive funding and allocated a great deal of spectrum to support local public safety efforts – and that commercial intervention is now necessary.

Consequently, I believe it is relevant to this hearing for me to share, briefly, New York City’s perspective on Federal funding and spectrum allocations for public safety communications; and to describe the state-of-the-art broadband wireless network New York City is deploying – virtually without Federal support.

Unfortunately, for more than a decade, the Federal government’s provision of funding and spectrum to state and local public safety communications has been inadequate. New York City, which is at highest risk for another terrorist attack, has committed more than \$1 billion of local taxpayer money since the 9/11 attacks – to enhance our public safety voice and data communications networks, and to upgrade and “harden” our E-911 infrastructure. At the same time, we have received less than twenty cents on the dollar in Federal financial support to assist these Homeland security-related initiatives.

Equally distressing is the perception that public safety has inefficiently used radio spectrum. Nearly eleven years ago, on September 11, 1996, a high-level Federal advisory committee summarized: “Not only does the shortage of spectrum jeopardize the lives and health of public safety officials, it threatens their ability to fully discharge their duty to protect the lives and property of all Americans.”

Regrettably, since that warning cry, there has been no national provision of spectrum to support emergency responder voice communications. Indeed, absent action by this Committee last year, public safety would have been forced to wait well beyond 2009 for 700 MHz spectrum. In addition, there has been only a single – much appreciated but exceedingly inadequate – provision of 4.9 GHz spectrum to support data applications.

To summarize, the lack of Federal financial support and spectrum – rather than flawed or inadequate efforts by the state and local public safety communities – are at the heart of the challenge to achieve advanced broadband services and interoperability.

In March 2004, New York City issued a Request for Proposals for the implementation of a broadband wireless network for public safety to support our own high-speed public safety data needs. The solicitation, which was agnostic as to spectrum and technology, challenged the country’s leading systems integrators to propose the best available solution.

At the time, no Federal programs were available to assist the City in this initiative; and the public safety segment of the 700 MHz band was earmarked by the FCC for narrowband and wideband applications, rather than for broadband use. Consequently, the City, at considerable local expense, “went it alone.”

In September 2006, after evaluating and testing several competing solutions, New York City contracted with Northrop Grumman to deploy a \$500 million high-speed data network for public safety. The network, known as the New York City Wireless Network, or “NYCWiN,” will enable a wealth of mobile and fixed applications, including real-time video, rapid database lookup and the exchange of rich graphical information. NYCWiN will provide critical, real-time information to the City’s first responders where and when they need it.

The network, which is already operational in Lower Manhattan, and scheduled for citywide deployment by March 2008, utilizes 10 MHz of licensed spectrum in the 2.5 GHz band – spectrum which New York City has indeed purchased at market rates. NYCWiN employs UMTS technology, which is well suited for high-speed mobile data applications. Moreover, NYCWiN is an IP-based network, enabling fully interoperable data communications. Essential information can be shared instantaneously among multiple agencies. New York City is working through its existing interoperable communications relationships with its partners in state, federal and regional public safety agencies to ensure access to the network.

The FCC is now considering a nationwide buildout of a public-private network for first responders, on the 700 MHz frequency band, which aims for capabilities similar to those of NYCWiN.

New York City has described in comments filed with the FCC various factors that the FCC should consider in evaluating the merits of such a proposal. In the interest of time, I will outline our two most pressing concerns.

First, a national network, based on a “one-size-fits-all” approach, may not meet the disparate communications needs of emergency responders throughout the country. Second, it is not clear such a network would be forced to be engineered to meet the demanding, mission critical needs of public safety.

With respect to the one-size-fits all approach, as I just described, New York City is implementing a broadband data network that utilizes UMTS technology and the 2.5 GHz band. Recently, the District of Columbia opted to deploy a broadband network that utilizes a different technology (EV-DO), and different frequency band (700 MHz). These cities’ respective decisions were dictated by the fact that New York City and the Capital Region must contend with much different physical environments and different operational priorities.

Any scheme for a national network must, from technology- and spectrum-related standpoints, ensure that each implementing public safety jurisdiction has the flexibility to

evaluate and respond to its own circumstances, both physical and operational. It should surprise no one that the same technology and spectrum that “works” for New York City may not be very well suited to Los Angeles, and Boise, and Buffalo.

To accommodate these differences, the policies and rules governing the 700 MHz band must recognize the need for flexibility and discretion at the local, state and regional levels. New York City has implemented citywide and regional interoperability protocols between and among our emergency responders and those of neighboring counties in New York and New Jersey, along with regional authorities and various state and federal agencies.

Toward this end, the City participates in several regional planning bodies, including the Region 8 Regional Planning Committee, which currently coordinates use of 700 MHz and 800 MHz channels. The regional role in interoperability planning should be preserved with respect to broadband. Nor does the proposal for a national public safety licensee sufficiently address how channel allocation and frequency coordination will take place among various local, state and federal entities operating in a common area and/or responding to the same emergency.

New York City’s second major concern is that the proposed 700 MHz “public-private” network will, in fact, be dominated by commercial interests, and that deployment and maintenance will be undertaken based on a return on investment, rather than effectiveness of emergency response. The current FCC rulemaking includes no

parameters to uphold mission critical standards; and public safety agencies have no recognizable right, such as a license, to protect their interests. Moreover, the current proposal provides no indication of how the FCC will address the complex issues of ensuring that public safety has priority access vis-à-vis commercial interests and that access amongst various public safety authorities is appropriately prioritized.

Ultimately, emergency responders must not be forced to rely on a carrier-grade network, which would most likely not be available to them when it is most needed. Anyone who has ever experienced a large-scale emergency knows that cell phone communications quickly deteriorate and soon become impossible. This is the result of several factors, including “competition” among callers for access to cell antennas; possible degradation of the wired backbone interconnecting the network; and, frequently, the loss of both commercial and backup power to the network.

Compare this to NYCWiN. In the event of a major emergency, New York City government will be able to prioritize network access among various agencies and users. The network is being built with redundant backbones, overlapping coverage and a minimum of 24-hour backup power at each site. One cannot imagine that a commercial carrier would be willing to invest the capital required to build such a robust network in New York City. Public safety cannot be put in the position of sharing a “plain vanilla” network, which, quite frankly, is no option at all.

In the final analysis, public safety systems stand in stark contrast to commercial systems. Deploying and maintaining public safety systems entail much more detailed requirements analyses, engineering, testing and training. Heightened requirements include capacity, coverage, system restoration, reliability and security. Public safety networks require greater diversity and redundancy. There can be no experimentation in the public safety sector, because lives are at stake.

In conclusion, the public-private-partnership model holds promise; and should continue to be developed as a means of deploying next-generation voice and data networks utilizing various frequency bands. However, this model is also new and untested. Mandating that a portion of the limited public safety spectrum currently allocated to public safety be used for a nationwide, public-private broadband network on the 700 MHz band is fraught with uncertainties and risks.

Chairman Inouye, this completes my statement. The City of New York appreciates very much the privilege to participate in the Committee's hearing. I would be pleased to respond to your questions.