

**Department of Information Technology and Telecommunications
Testimony before the City Council Committees on
Fire and Criminal Justice Services, Public Safety, and Technology in Government
Oversight Hearing – Improvements in Communication Technology Among First Responders
Thursday, November 16, 2006**

Good morning Chairpersons Brewer, Martinez and Vallone, and members of the City Council Committees on Technology in Government, Fire and Criminal Justice Services, and Public Safety. My name is Ron Bergmann, and I am First Deputy Commissioner of the Department of Information Technology and Telecommunications, or DoITT. Thank you for the opportunity to testify today regarding improvements in communication technology among first responders, especially as related to the Citywide Mobile Wireless Network. When complete, this network will represent an historic enhancement to public safety communications in New York City. Joining me today is Mitchel Ahlbaum, DoITT's General Counsel and Deputy Commissioner for Franchise Administration.

New York City has made substantial improvements in communications technology for first responders during the Bloomberg Administration. In describing these improvements, the best way to begin is to distinguish between the two primary types of communication being addressed today—two sides of the same coin that together can be termed “first responder communications.” The first component is traditional voice communication, achieved through radios used by public safety personnel, and which my colleagues from the Police and Fire Departments have just described in detail; the second is data communication, which will be greatly enhanced by the Citywide Mobile Wireless Network. Today, I will be speaking primarily about this new data network; however, I would like to briefly outline some additional accomplishments with respect to voice communications.

The City has recently implemented a major radio enhancement through an upgrade to its 800MHz Radio Network. Now, with a more robust platform, which provides multiple, borough-based transmit sites, the 800MHz Radio Network offers improved coverage and capabilities throughout the city. This network provides a means for secondary responders to have interagency communication during major incidents, through the use of specialized talk groups. The City's main interoperable talk group is enabled by the “ALERT” channel. The ALERT channel is currently available to responders in 56 City, State and regional agencies, as well as 78 hospitals and healthcare facilities. Another channel on the network provides a dedicated talk group for more than 40 agency commissioners, allowing for high-level, interoperable communication among agency heads, as needed.

The 800MHz Radio Network is monitored on a 24x7 basis by the Office of Emergency Management (OEM), which conducts regular roll calls among the entities that utilize it. In the event of an emergency, designated personnel in these agencies would switch to the appropriate channel to share information and facilitate coordination.

As a result of the initiatives you have heard about today, New York City's interoperable systems are now considered to be among the best in the country. The City continuously works with the Department of Homeland Security (DHS) to meet federal mandates related to interoperability. In August, the City reached a significant milestone when it successfully conducted interoperability exercises with DHS, as part of a requirement to validate the region's capabilities.

DHS evaluators surveyed interoperable communications resources across the New York urban area, the protocols for using interoperable equipment, and procedures for communication during major incidents. The City received very positive feedback on its interoperable systems and protocols, evidenced by acceptance of the region's Tactical Communications Interoperability Plan.

Complementing the improvements in voice communication are the City's efforts to establish enhanced data communication for public safety and public service personnel. A critical need exists for a high-speed network to provide advanced, interoperable data communications among and across key agencies. Our emergency responders, the world's best, need access to new and varied types of information and applications both on a daily basis and during large-scale events, and a dedicated network ensuring them use of the tools required to protect New Yorkers is essential. A second consideration to enhance the City's infrastructure became evident as the Bloomberg Administration continued to improve the City's quality of life—namely, enabling the City's mobile workforce across all agencies to enhance service delivery to the public.

To that end, the City embarked on a collaborative process that included the NYPD, FDNY, OEM, the Department of Transportation (DOT), and DoITT. This team developed robust technical requirements and defined specifications for a high-speed mobile wireless network. Among others, the criteria related to data throughput, in-street coverage, security, reliability, scalability, and integration for the support of multiple classes of applications. After issuing a Request for Proposals in March 2004, the evaluation committee reviewed responses from some of the country's top systems integrators, held vendor presentations, completed exhaustive technical evaluations, and selected two vendors to participate in a pilot program to determine which best demonstrated the ability to meet the City's requirements.

The result of these efforts, announced by Mayor Bloomberg in September, was the selection of the Northrop Grumman Corporation to build the Citywide Mobile Wireless Network. The most aggressive commitment by any municipality in the country to provide a next-generation public safety network, the Citywide Mobile Wireless Network, or CMWN, will give first responders from the Police and Fire Departments high-speed data access to support large file transfers, including federal and state anti-crime and anti-terrorism databases, fingerprints, mug shots, city maps, and full-motion streaming video. A fully-interoperable, IP-based network, the CMWN will enhance coordination by linking first responder personnel, on-scene, with incident managers at remote sites through real-time data and video feeds. Other City agencies will be able to utilize the network during non-emergency periods to fulfill many public services, including health and safety inspections and various maintenance activities in the field.

To build, equip and maintain this network, and to provide technical support to DoITT, Northrop Grumman has been awarded a five-year, \$500 million contract. To help fund the build-out of the network, the City has secured roughly \$20 million from Department of Homeland Security for network design, and we will continue to aggressively pursue any available funding to support this important investment. The CMWN is expected to be operational throughout lower Manhattan—the area below Canal Street, river-to-river—by January 2007, and will be implemented throughout the five boroughs over the following 18 months.

The CMWN contract was awarded after a thorough evaluation process by representatives from the NYPD, FDNY, DOT and DoITT, with support from the City's independent quality assurance consultant, the New York State Technology Enterprise Corporation (NYSTEC). This evaluation included a seven-month pilot period in a section of lower Manhattan.

The selection was based upon performance in a series of nearly 150 tests, evaluated against rigorous technical criteria. The selected vendor proved its technology was successful in emergency simulations and multiple failure scenarios—including the loss of commercial power and telecommunications services. The technology also allowed emergency communications to be prioritized over non-critical communications. During a key component of the pilot, the City conducted a successful interoperability exercise, including the NYPD, FDNY, EMS, OEM and DOT, during which the network was programmed to simulate an emergency incident. Northrop Grumman's solution allowed responders in the field to communicate with their operations headquarters and send and receive critical information during demanding conditions.

So, during a critical event—or during a normal work day—what does this mean for first responders and others in the City's mobile workforce? I spoke earlier about the CMWN supporting multiple classes of applications, and would now like to describe some more specific examples.

The first class, Wireless Broadband Public Safety Applications, includes high-speed data and video to support access to agency applications and provide large data and image file transfers. So, for example, the network would enable the access of police officers to real-time photo, warrant, and license plate databases, for the identification of suspects in criminal investigations, and enhance access for detective units to the NYPD Real Time Crime Center. It would also enable the Fire Department to establish reliable, wireless connectivity between its Operations Center and responders in the field to transmit on-scene data and full-motion, streaming video, and provide remote access to operating procedures, maps and other geographic information, enhancing FDNY's existing and planned technologies.

Class 2 supports Automatic Vehicle Location, or AVL technology, which has been installed in nearly 1,100 fire trucks and ambulances citywide. The CMWN will further enhance these AVL systems—which have already contributed to decreasing ambulance response times—by providing real-time map and database updates. The network will also allow for the expansion of AVL technology to the vehicles of other agencies. The City maintains a fleet of over 25,000 vehicles, and AVL can achieve the goals of more efficient fleet management and increased safety for field workers.

Class 3 supports Wireless Emergency Call Boxes for the public to summon emergency responders when needed. These self-contained, IP-based phone boxes, operated by solar battery power, are intended for deployment in areas without access to wired telephony or commercial power.

Class 4 supports Wireless Traffic Signal Control. DOT can use the network to expand its ability to remotely monitor and program traffic signal controls, both on a daily basis and during emergency events. The CMWN will provide secure, redundant and reliable transmission of incident information, including photos and video, and further enable DOT to improve safety, ease traffic flow, and reduce congestion.

Moreover, the CMWN will support a range of additional public service applications that will provide significant improvements over existing technologies for the City's mobile workforce, by automating and streamlining time-consuming transactions and processes.

For instance, the network can facilitate new water meter reading technology to the Department of Environmental Protection, which will likely reduce the costs associated with conventional methods of water meter reading. This technology will also improve customer service by increasing actual read rates, providing customers with better consumption information, and detecting potential water leaks.

Since the Mayor's announcement, we have continued working in close consultation with City agencies to help determine how the network can be used to enhance the ways they serve the public. As the network is built out, we welcome the Council to tour the Network Operating Center to view some of the many functions the CMWN will offer our first responders and agency partners. Council Members Vallone and Brewer, and Council staff have already toured the facility, and we are happy to offer the Council additional sessions at your convenience.

Thank you again for the opportunity to testify today. As you can imagine, DoITT is very excited about the potential uses of the Citywide Mobile Wireless Network, and I hope you agree it will play a significant role in helping to keep New Yorkers safe and secure. When complete, the network will be one worthy of the world's greatest city, and the people who protect it on a daily basis. As always, we welcome your feedback and comments, and would be pleased to address any questions you have.

Thank you.