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 – Implementation Status of the New York City Wireless Network
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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 Paul Cosgrave, Commissioner of the Department of Information Technology and Telecommunications, or DoITT. Thank you for the opportunity to testify today regarding the New York City Wireless Network. When complete, this network will represent a truly historic and unprecedented enhancement to the administration of both public safety and public service across the City of New York. Joining me today is Chief Thomas Gangone from the New York City Police Department, Chief of Communications John Coloe from the Fire Department, and Deputy Commissioner Henry Jackson from the Office of Emergency Management. As you know, the City's public safety agencies are major beneficiaries of this network, and these agency representatives are here to answer questions you may have about their plans to utilize this technology.

New York City has made substantial improvements in communications technology for first responders during the Bloomberg Administration. In describing these improvements, however, it is important to first distinguish between traditional voice communication, achieved through radios used by public safety personnel, and data communication—the subject of today's hearing—which will be greatly enhanced by the New York City Wireless Network.

Nearly four years ago, DoITT issued a Request for Proposals aimed at addressing the City's critical need for a high-speed network to provide advanced, interoperable data communications among and across key agencies. In developing this RFP, the City embarked on a collaborative process of developing robust technical requirements and defined network specifications that included the Police Department, Fire Department, Office of Emergency Management, the Department of Transportation, and DoITT. After issuing the RFP in March 2004, this 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 assess which best demonstrated the ability to meet the City's requirements.

The result of these efforts, announced by Mayor Bloomberg in September, 2006 was the selection of the Northrop Grumman Corporation to build the New York City Wireless Network, or NYCWiN. To build, equip and maintain NYCWiN, and to provide technical support to DoITT, the City awarded Northrop Grumman a five-year, $500 million contract. To help fund network build-out, the City also secured roughly $20 million from the Department of Homeland Security.

The most aggressive commitment by any municipality in the country to provide a next-generation public safety network, NYCWiN will give first responders high-speed data access to support large file transfers, including federal and state anti-crime and anti-terrorism databases, fingerprints, mug shots, city maps, automatic vehicle location, and full-motion streaming video. A fully-interoperable, IP-based network, NYCWiN will enhance coordination by linking first responder personnel, on-scene, with incident managers at remote sites through real-time data and video feeds.

As significant as NYCWiN will be in enhancing public safety, its role in improving the daily delivery of non-emergency City services will also be transformative. NYCWiN will support a range of additional public service applications, providing substantial improvements over existing technologies for the City's mobile workforce by automating and streamlining time-consuming transactions and processes. Through NYCWiN, the City's mobile workforce will have the ability to work from anywhere, at any time, accessing a wealth of data such as agency files, databases, high-resolution photos—or any application otherwise accessible from the worker's office-bound, desktop PC.

Since January 2007, NYCWiN has been operational throughout lower Manhattan—the area below Canal Street, river-to-river—and is now being built throughout the city. Initial launch of the network is scheduled for April, at which point approximately 70% of the City's police precincts and fire houses will be encompassed within the service area. By this summer, the service area will have expanded to include over 95% of the City, with full coverage for the city's entire 322 square miles achieved by year's end. On the attached map, the shaded yellow region represents the area of the city covered at initial network launch in April; light green, the portions added by this summer; and dark green, the citywide implementation by year's end.

In total, NYCWiN will consist of 400 network sites across the five boroughs, managed from two fully-redundant network operation centers (which have already been completed) protected with 24-hour generator backup power, linked via multiple diverse fiber circuits, and staffed around the clock with technical support from the vendor. From an agency perspective, DoITT will be dedicating nine staff members to full-time operational support of City agencies running applications on the network. Unlike commercial networks, NYCWiN is designed for greater reliability, resiliency and redundancy. It will provide prioritized access for first responder data transfers in the event of an emergency, thereby ensuring the City the ability to manage network traffic, which can otherwise degrade performance.

As to the 400 sites themselves, the vast majority—over 95%—consist of rooftop antennas sited with approval from the Department of Buildings. The remaining sites, fewer than 20 citywide, require additional zoning approval by the Board of Standards and Appeals and/or City Planning Commission, due to the need for unipoles to achieve appropriate coverage in certain neighborhoods. As DoITT proceeds with these sites in particular, we have taken the opportunity to meet and brief a number of Council Members, elected officials and community groups in these districts to gather input before submitting BSA and CPC applications. NYCWiN sites are lower-powered and less obtrusive than their counterparts typically used by wireless carriers.

In advance of April's initial launch—and since the network first became operational in lower Manhattan early last year—we have been working with our agency partners to test a variety of public safety and public service applications on the network. As a result of this testing and our close collaboration with City agencies, the first devices will be ready for deployment on NYCWiN following launch in April. These include wireless vehicle modems for the NYPD, FDNY and OEM, wireless traffic control modems for DOT, and handheld units for agencies conducting enforcement and inspection activities in the field. In addition, wireless cards will be available to all City agencies for use by their mobile staff in accessing agency systems remotely via NYCWiN. Currently, some 53 applications across 19 agencies are planned or in trial on the network, allowing agencies to evaluate citywide opportunities for programs that run the gamut of the City's key service areas: from public safety to inspectional services, from citywide administration to health and human services.

As it relates to public safety, for example, the network will enhance emergency response, command and control, and situational awareness capabilities by enabling real-time access to vital information. NYCWiN will enable police officers to access 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. In addition, mobile cameras can operate on the network and be tied back to existing command centers to support, for example, the Lower Manhattan Security Initiative. NYCWiN can also support 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.

Through NYCWiN, the Fire Department will be able 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.

Another type of application supported by NYCWiN is Automatic Vehicle Location, or AVL technology. As you know, this technology has already been installed in nearly 1,100 fire trucks and ambulances citywide—contributing to decreased ambulance response times—and the network will further enhance these systems by providing real-time map and database updates.

By also allowing for the expansion of AVL technology to the vehicles of other City agencies, NYCWiN can help attain more efficient fleet management and increased safety for field workers. For example, the Department of Sanitation is currently using the network to pilot the use of AVL technology in more than 50 collection, supervisory and salt-spreading vehicles in DSNY's Queens 8 District. Moreover, as mentioned by Mayor Bloomberg in his *State of the City Address* last month, we are currently working with the Department of Education to explore the use of AVL technology in City school buses to help measure on-time performance and keep track of the fleet. Other agencies planning to install AVL technology utilizing NYCWiN include the Departments of Correction, Health and Mental Hygiene, and the Administration for Children's Services.

In addition, a number of public service agencies will be utilizing NYCWiN at launch to more efficiently conduct inspections and various maintenance activities in the field. For instance, with the Department of Environmental Protection, we are coordinating citywide rollout of an Automated Meter Reading system, or AMR. Implementation of this technology comes on the heels of a pilot project conducted on the meters of 800 homes in lower Manhattan and Brooklyn Community Board 1, and will be more efficient than 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. Other agencies rolling out handheld devices on NYCWiN include the Departments of Buildings, Health and Mental Hygiene, and the New York City Housing Authority.

Finally, the Department of Transportation is utilizing NYCWiN to enable its Wireless Traffic Signal Control program, which through the use of wireless modems will expand the City's ability to remotely monitor and program traffic signal controls, both on a daily basis and during emergency events. NYCWiN will provide secure, redundant and reliable transmission of incident information—including photos and video—and further enable DOT to ensure that lights remain in sync, ease congestion, and improve response times to traffic signal control and maintenance issues.

Beginning with the April launch of NYCWiN, DOT will be installing 2,400 of these wireless traffic control modems throughout the City over the next year, and plans to eventually equip all the City's intersections with NYCWiN-enabled modems.

As we implement the network citywide, we are also conducting demonstrations and briefings for various elected officials and agencies to apprise them of NYCWiN's capabilities. Included in these have been:

- Workshops for City agencies to review NYCWiN's capabilities and strategize about options for migration to the network, including demonstrating devices that receive broadcast alerts, streaming video, and provide access to agency systems as well as the City's intranet;

- A demonstration of NYCWiN's capabilities in lower Manhattan in December for the United States Department of Homeland Security's Assistant Secretary for Cyber Security and Telecommunications. The Assistant Secretary was pleased with what he saw in New York City, and the meeting fostered excellent exchange of information with DHS about the City's wireless initiatives; and

- Demonstrations and briefings for several Council Members and their staffs, which we would be pleased to extend to all Council Members.

Thank you again for the opportunity to testify today. As you can imagine, my colleagues citywide and I very much anticipate the launch of NYCWiN in the coming months. When complete, this system will provide robust, reliable and resilient data communications, enhancing coordination and ensuring that critical information reaches our mobile workforce, to the benefit of all City agencies and the people they serve.

Thank you for your support of this important initiative. We welcome your feedback and comments, and would now be pleased to address any questions you may have.

Thank you.