

Emergency Communications Systems And Equipment

by Laura Forlano

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As Summer approaches -- reminding us of last August's blackout -- increased threats of terrorist attacks and the need for high-security around the Republican National Convention make it vital to assess what city officials are doing to insure that the city's emergency communications systems are fully operational. These include the 911 and E-911 (for mobile phones) systems, radio spectrum for public safety communications, and a high-speed wireless back-up network.

911 and E-911

Mayor Michael Bloomberg has ordered an overhaul of the city's 911 system after the failure in late March that caused the emergency system to shut down for two hours due to a Verizon employee error. The overhaul would make the system faster, more reliable and more efficient. Under the plan, the city's eight dispatch centers will be consolidated into two.

"The world continues to get more complicated, but responding to emergencies quickly and with the right resources still makes the difference when lives are at risk," Bloomberg [reportedly](#) said through a spokesman. "So whatever we can do to integrate and streamline our dispatch systems will only protect the people of New York."

New Yorkers have paid \$281 million in taxes on their telephone bills to improve 911 since 1992 but the system -- which handles about 12 million calls a year -- still lags behind. Last year, the 311 system was introduced to handle non-emergency calls in order to alleviate the burden on the 911 system.

Similarly, cell phone customers are paying \$1.20 a month for "enhanced 911," a service that enables [the location of callers to be traced](#), according to NY1. However, only 12 cents per bill is going to the E-911 project while the rest is being used for the state's general emergency fund. The upgrade was prompted by the deaths of four teenagers who drowned when their boat sank after a failed 911 call.

Radio Spectrum for Public Safety

Increased cell phone use is interfering with public safety communications according to a City Council hearing on radio spectrum held in March. This is because public safety uses overcrowded radio systems, share channels with other agencies and share the same bandwidth with private cellular providers.

"During crisis," said Councilmember Gale Brewer, "our first responders need reliable communication systems. Spectrum is important because it is the 'highway' through which

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first responders communicate with each other. A shortage of spectrum jeopardizes the lives and health of our courageous public safety officials and threatens their ability to protect the lives of New Yorkers.”

Currently, there are two plans for dealing with this overcrowding and the danger that it presents for emergency communications. One option, proposed by the [Association of Public-Safety Communications Officials-International](#) and dubbed the “Consensus Plan,” would try to untangle public and private users of spectrum. Nextel Communications has committed \$850 million for this initiative. Another option, the “Balanced Approach” as proposed by Verizon, would maintain current spectrum allocations and resolve problems on a case-by-case basis.

Currently, the Department of Information Technology and Telecommunications (DoITT) is supporting the first proposal. The issue is unlikely to be resolved before January 2007, which is the deadline for the transfer of spectrum as part of pending federal legislation called the HERO Act.

In the meantime, the office is exploring other ways to improve the city’s emergency communications including using high-speed wireless technology to expand the capabilities of public safety workers. For example, sending building maps to firefighters on the scene or mug shots to police officers.

High-Speed Wireless Back-up Network

On May 5, Governor Pataki announced the commitment of \$10 million dollars in funding from the Empire State Development Corporation to build a high-speed wireless network in Lower Manhattan. The announcement was made in response to a proposal by the Downtown Alliance for the development of a redundancy system that would allow telephones and the Internet to function in an emergency. The network reportedly would be the first such project in a major business district in the country.

“To further help businesses thrive in the post September 11th world, we must make Lower Manhattan into a commercial district with truly cutting-edge telecommunications infrastructure,” Pataki said. “Let’s install a wireless data network that will enable downtown’s businesses to broadcast their data through secure channels to satellite locations.”

The “Lower Manhattan Wireless Redundancy System” is intended to make the

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telecommunications infrastructure more reliable and resistant—allowing businesses to continue to be connected with the world during a disruption. Wireless technology uses airwaves—instead of fiber optic cables or copper wires—to send communications over the Internet. While the network is primarily intended for data, it could also be used for voice.

The state funding will cover the basic infrastructure—roof-top antennas on Lower Manhattan’s tallest buildings—that could be put in place in about six months. The antennas would be connected to locations other parts of Manhattan, Brooklyn or New Jersey. The network uses laser light, non-visible infrared wavelengths and radio microwaves to send signals up to one mile without wires—significantly farther than wireless “hot spot” technology which only ranges between 300 and 1,000 feet.

Since September 2003, the Downtown Alliance has been operating a [free public wireless network](#) that has eight “hot spots” in Lower Manhattan including Bowling Green Park, City Hall Park and South Street Seaport.

Both small and medium-sized businesses and large corporations benefit from these networks because they are inexpensive, secure and reliable. However, large corporations are unlikely to move to Lower Manhattan without a back-up communications system. Thus, the new project is vital for maintaining the economic competitiveness of downtown New York as a thriving business district. It will also insure reliability for public safety communications in an emergency.

LACK OF EMERGENCY VOLUNTEERS

At a [summit](#) earlier this month at Baruch College, City Council Speaker Gifford Miller announced the results of a survey on the city’s emergency preparedness. The survey showed that out of 160 community organizations, over 70 percent have not been informed by the City on how to prepare for an emergency.

“Unfortunately, New York City still does not have a comprehensive, coordinated and borough-oriented system to recruit, register and deploy emergency volunteers,” said Speaker Miller. “That over 90 percent of community organizations have never been informed by the city on how to become emergency volunteers is wholly unacceptable. The city must do more to assist neighborhoods and improve these organizations’ ability to offer community residents real emergency preparedness.”

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CITY COUNCIL'S NEW WEB SITE

More details about the summit can be found on the council's new Web site <http://www.nyccouncil.info>. The new site is a welcomed improvement because the Web address is much easier to remember and it has a number of useful features, as Speaker Miller himself points out in an article for Gotham Gazette, [The Rise of the E-Citizen.](#)

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