TESTIMONY OF CHIEF OF DEPARTMENT SALVATORE CASSANO

BEFORE THE
CITY COUNCIL COMMITTEES ON
FIRE & CRIMINAL JUSTICE SERVICES
PUBLIC SAFETY AND
TECHNOLOGY IN GOVERNMENT

December 10, 2009

Introduction

Good afternoon Chairpersons Brewer, Vacca and Vallone, and members of the Committees. My name is Salvatore Cassano, and I am the Chief of Department of the New York City Fire Department (FDNY). I am pleased to have this opportunity to discuss with you improvements in emergency call-taking and dispatch operations at the FDNY.

The Emergency Communications Transformation Program

As Deputy Mayor Skyler testified, New York City operates the world's largest 911 emergency communications system, handling more than 12 million calls per year. New York City 911 is currently supported by a diverse set of services, systems and operations provided by the NYPD, the FDNY and FDNY Emergency Medical Service (EMS). To better serve New Yorkers, the FDNY has been working closely with the NYPD and Department of Information Technology and Telecommunications (DoITT) over the last several years to undertake a comprehensive review and redesign of the City's 911 operations in an initiative called the Emergency Communications

Transformation Program (ECTP). The ECTP initiative is obviously a high priority of the Bloomberg Administration and grew out of the October 2003 Mayoral Task Force report following the blackout. ECTP is comprised of a number of different sub-projects, some of which include:

- Modernization and strengthening of the 911 network to improve the public's access to 911 during emergencies;
- Greater back-up systems for NYPD, FDNY and EMS operations through enhanced redundancy and improved failover capabilities;
- Upgrade and new construction of radio towers;

- Modernization of agency Computer Aided Dispatch (CAD) systems; and
- Installation of Automated Vehicle Locator (AVL) technology in emergency response vehicles and integration with modernized CAD systems.

These projects are based upon the best practices from across the emergency call-taking industry, and will streamline and integrate our emergency call-taking and dispatch operations. Benefits of ECTP include improved data sharing among agencies — including the immediate availability of emergency data to the NYPD, FDNY and EMS — and better coordination of resources directed to the scenes of emergencies. With modern, state-of-the-art voice communication equipment, calls will enter the 911 system faster than before and critical information will be more immediately available — leading to decreased response times. Upgrades to our telephone and radio networks are also strengthening our emergency communications infrastructure, and will provide failover capabilities that we have never had before.

Public Safety Answering Center

ECTP also includes the design, renovation and implementation of the first Public Safety Answering Center (PSAC 1) in downtown Brooklyn and plans for PSAC 2 in the Bronx, which will allow enhanced coordination among our first responder agencies and their respective dispatch operations. Integration and co-location of emergency response agency operations eliminates a step in handling 911 calls, saving precious time.

Since it began, the ECTP project has included careful consideration of and work toward improved back-up capabilities. To that end, we have increased the capacity and redundancy of FDNY's remaining Communications Offices (COs) in the Bronx and Queens, allowing us to use these centers as backup facilities until PSAC 2 is completed.

Accordingly, these two facilities now contain sufficient failover capacity for the three borough operations (Manhattan, Staten Island and Brooklyn) that have moved into Brooklyn's PSAC 1. This provides borough-to-borough redundancy for the first time in City history. Conversely, PSAC 1, by itself, will also have sufficient backup to support the call operations from all five boroughs in the event the City needs to relocate the Bronx and/or Queens COs. And, ultimately, when PSAC 2 is completed we will have a fully-redundant, load-balanced back-up site to PSAC 1, providing sufficient capacity for all of the City's emergency operations.

Unified Call Taking

These many coordinated initiatives have enabled the City to streamline and optimize the emergency call-taking and dispatch process. Under the new system, called the Unified Call Taking (UCT) program, Police Call Takers (PCTs) in the Brooklyn PSAC relay critical fire information via computer directly to FDNY dispatchers assigned to the specific boroughs. Since the new 911 system automatically recognizes the location of a caller, this data can also be instantaneously relayed, along with all of the incident information, to an FDNY dispatcher with borough-based knowledge to determine where to assign the appropriate units to the scene – as was the case under the previous system.

Under the previous process, all 911 calls were routed to PCTs who would either assign an NYPD unit or, if needed, conference in an FDNY or EMS call taker in the appropriate borough. FDNY/EMS call takers would then have to relay the same information to FDNY/EMS dispatchers. This usually meant that a caller would have to provide information to two different call takers, expending valuable time.

Therefore, the UCT process reduces the time it takes to initiate a response. It is important to note that under UCT, dispatchers with borough-specific knowledge – the very same dispatchers who fielded calls under the previous system – are still going to handle the 911 calls they always did.

In late October, based on a review of the first six months of UCT -- and to minimize the possibility of inaccurate information being transmitted -- the NYPD and FDNY launched a new training program for PCTs. In addition, on November 20, 2009, City Hall announced that the City would *temporarily* modify the process by which 911 calls reporting fires are handled. Under the modified procedure, a PCT will now also conference in an FDNY Dispatcher who will listen to the call, have the opportunity to ask additional questions of the caller, if necessary, and verify the accuracy of the information that the PCT transmits to the Fire Dispatchers. This modification is intended to help further train PCTs as they take on their new responsibility. This new procedure began November 24, 2009 and will last until both agencies deem it no longer necessary.

At a Council hearing a few weeks ago, the Fire Commissioner was asked to respond to questions about a number of incidents where UCT was blamed for causing a delayed FDNY response. We need to set the record straight about those incidents. The facts are that in these instances, there were no issues with the UCT *system*. A 911 caller providing an incorrect or vague address is not a UCT *system* problem. A 911 call that is cut off before an address is given is not a UCT *system* issue.

In these cases -- which have been highlighted in the media -- the wrong address or no address was provided in the initial call to 911 or the wrong address was inputted. This could have happened before UCT was initiated. Training for call takers is critically

important. But wrong information is provided to 911 every day. That fact of life cannot fairly be attributed to UCT.

Conclusion

We are confident that enhanced emergency dispatch will improve the response of what are already the premier emergency response agencies in the world.

Thank you for the opportunity to speak with you today. I would be happy to answer your questions.

STATEMENT OF DEPUTY CHIEF CHARLES F. DOWD COMMANDING OFFICER, COMMUNICATIONS DIVISION NEW YORK CITY POLICE DEPARTMENT

BEFORE THE NEW YORK CITY COUNCIL COMMITTEES ON PUBLIC SAFETY, FIRE AND CRIMINAL JUSTICE SERVICES, AND TECHNOLOGY IN GOVERNMENT

DECEMBER 10, 2009

Good afternoon. I would like to discuss with you the Police Department's participation in the development and implementation of the Unified Call Taking program.

Prior to introduction of Unified Call Taking, emergency calls to 911 were received by NYPD call takers who ascertained the location and nature of the emergency. If the call was reporting a fire, the NYPD call taker then used a one-touch link to conference in an FDNY dispatcher, who would essentially ask the same questions and obtain the same information from the caller, and relay the information to FDNY dispatchers. As Chief Cassano has stated, this usually meant that a caller would have to provide information to two different call takers, using extra time in situations where every second is vital. Instead, Unified Call Taking reduces the time it takes to initiate a response, by giving the NYPD call taker the responsibility of obtaining the relevant information and electronically relaying it directly to an FDNY dispatcher.

Because of the critical nature of this new role for NYPD call takers, it was imperative that the program be designed and implemented with great care by the FDNY and NYPD. Together, both agencies, with the help of DoITT, collaborated closely in designing the program mission, system requirements, and functional specifications, over the course of many months. They devised new codes and procedures to enable NYPD call takers, using the Police Department's SPRINT system, to seamlessly and electronically communicate with the FDNY's Starfire system.

Especially important, the agencies jointly developed a training plan so that the 1,300 NYPD call takers, dispatchers and supervisors would be capable of implementing Unified Call Taking citywide. Among other topics, the eight-hour training course instructed NYPD personnel regarding the new codes they were to use, the way calls were to be routed to FDNY, the importance of providing vital information using the structure of the Starfire system, the correct way to question callers to obtain critical information quickly, how best to identify and communicate special locations and situations, such as fires on bridges or trapped callers, and how to handle calls if one of the computer systems is temporarily malfunctioning.

As Unified Call Taking went live, the FDNY and NYPD continued their close collaboration, with structured weekly meetings as well as daily contact to discuss issues and

problems, share feedback, and learn from the developing experience. That feedback and experience is used to provide continuing in-service training for NYPD personnel. In fact, a new training initiative was developed in October of this year and is in the process of being conducted by both NYPD and FDNY trainers, to provide greater insight for call takers into how the information they provide is used in the field. While this training is proceeding, however, we have temporarily introduced a new procedure for UCT, in order to minimize the possibility of inaccurate information being transmitted. NYPD call takers continue to receive the calls and electronically transmit them to FDNY dispatchers, but they now also conference in an FDNY call taker as soon as they know the call concerns a fire, so that there is a second call taker on the line in real time, able to ask pertinent questions or verify the caller's information. In this way, both agencies are continuing to lower response time while increasing the accuracy of the information obtained and transmitted, as NYPD call takers become more familiar with their new role.

Our agencies are committed to continuing to work together to make steady improvement to the Unified Call Taking program, in the strong belief that UCT will serve to quicken emergency response in New York City. We would be pleased to answer your questions.

Testimony of Edward Skyler Deputy Mayor of Operations, City of New York

Hearing on Unified Call Taking (UCT) by the City Council Committees on Public Safety, Technology in Government and Fire and Criminal Justice Services

(December 10, 2009)

Good afternoon Chairwoman Brewer, Chairman Vacca, and Chairman Vallone, and thank you for providing me with an opportunity to testify about the Emergency Communications Transformation Program (ECTP), and specifically, the implementation of Unified Call Taking (UCT). I am joined today by Salvatore Cassano, Chief of Department for the Fire Department, and Deputy Chief Charles Dowd, Commanding Officer of the Police Department's Communications Division.

Background on 911 Operations

The City first launched 911 in July of 1968, during the Lindsay administration. For the first time in City history, the public was able to dial "911" for emergency police response, instead of calling the main number for the Police Department. 911 services were expanded for Fire and Emergency Medical calls five years later.

What is truly remarkable, though, is that little else has changed since then. In recent years, this outdated system has been strained by increased call volumes and obsolescent technologies. 911—the backbone of the City's emergency response infrastructure—was in danger of becoming a relic; outdated to the point that maintaining the existing systems had become increasingly difficult.

The 9/11 attacks raised call-taking volumes to previously unseen levels. Although the systems remained functional during that time, a high percentage of the calls received in the immediate aftermath of the attacks were lost – never reaching an operator. The 2002 McKinsey Report, which assessed the City's emergency response to the 9/11 attacks, attributed most of these losses to congestion on wired and wireless communication networks throughout the City, but also recommended specific upgrades to Fire Department systems, and technologies that would enhance standardization and the ability of Police and Fire Departments to further integrate their response capabilities.¹

¹ McKinsey & Company, Increasing FDNY's Preparedness, 2002, pp. 84-95

The blackout in August of 2003, that affected large parts of the Northeastern United States, revealed serious operational and technical vulnerabilities in the Verizon network on which 911 relies. The failure of core operating systems and network congestion throughout the City left some people unable to reach 911 operators for hours and, even after congestion issues abated, the overall system continued to fail as Verizon service and backup power sources failed to support call switching activities at their Central Offices.

After the blackout, Mayor Bloomberg convened a task force to conduct in-depth analysis of the City's response to this event. The task force's complete findings, which were detailed in a public report to the Mayor in October of 2003, reached several serious conclusions about the City's police, fire, and emergency medical 911 operations:

- An overall lack of efficiency and collaboration illustrated by the "silo-based manner" in which each agency managed its operations through the use of separate facilities, telephony systems and supporting technologies.
- Verizon-related services at three central offices and the Police Department's Brooklyn call taking center lacked resiliency; backup power resources failed, and call taking capacity was inadequate for the unprecedented call volumes during the early hours of the event.
- Archaic technologies and deteriorating infrastructure led to fragmented accountability among City agencies.

A serious outage occurred in March of 2004, when a Verizon technician was making repairs to the "switch," a call-routing device which processes not only 911 calls for the Police Department's primary facility, but also the calls of residential and commercial tenants in the same area. As a result of one mistake, all 911 calls from Brooklyn, Queens and Staten Island were rerouted to other customers on the same switch for a two-hour period. This experience reaffirmed the need to put 911 services on dedicated telecommunications infrastructure.

² NYC Emergency Response Task Force, Enhancing New York City's Emergency Preparedness; A report to Mayor Michel R. Bloomberg, October 28, 2003, p. 9

Emergency Communications Transformation Project (ECTP)

The Emergency Communications Transformation Program—or ECTP—began to take shape in 2004, and was designed to address these and other shortcomings in the City's emergency public call taking and dispatch operations by overhauling the way operations are managed and supported. The simple fact is that New York City has been behind the times, and certainly well behind the efforts of other major cities. Chicago, Houston, Nashville, San Francisco and Washington, D.C. are just a few of the cities that had already made commitments to pursue similar changes to their 911 operations.

The ultimate goal of ECTP is to save lives by reducing call times and improving the reliability of 911 operations. Since 2005, the Police and Fire Departments have worked on an integrated project management team that includes specialists from the City's Department of Information, Technology and Telecommunications (DoITT). Together, they have pursued four key objectives through ECTP:

- Co-locate the Police, Fire and Emergency Medical call taking and dispatch operations through two new load-sharing facilities—Public Safety Answering Centers 1 and 2.
- Create new layers of redundancy and resiliency in all areas of the 911 operation through new technology and operational efficiencies.
- Support the standardization of relevant technologies across agency lines, including systems for Computer Aided Dispatch (CAD) and telephony.
- Introduce Unified Call Taking (UCT) to reduce call times, enhance the quality of decision dispatching and ultimately save lives.

The City's project management team, supported by more than a dozen primary vendors for distinct facility- and technology-related components of the project, has already made significant progress toward these objectives, including:

- Construction of PSAC 1 at Brooklyn's MetroTech Center is complete, and the three previously borough-based Fire Department Communications Offices from Manhattan, Brooklyn and Staten Island have moved in and begun dispatching on the new telephony, software and <u>dedicated</u> Verizon switches.
- The remaining two Fire Department Communications Offices in the Bronx and Queens have been upgraded to serve as dual purpose back-up facilities until PSAC 2 is complete.

- Police Call Taking and Dispatch will begin moving into PSAC 1 in the Spring. One Police Plaza has been upgraded to serve as a fully redundant back-up call center for Police Department operations until PSAC 2 is completed. When EMS moves into PSAC 1—leaving its former space available as a standby site—all three components of 911 will have fully operational backup capacity for the first time in City history.
- Site acquisition and design for PSAC 2 at the Hutchinson Metro Center in the Bronx are now complete. Pre-construction work has begun and the facility will become operational in 2013.
- Fire and EMS Computer Aided Dispatch or "CAD" systems have been upgraded, and a new NYPD CAD system is under development and will be deployed by 2012.
- A data link has been established between the Police and Fire emergency dispatch systems a critical component of UCT which allows 911 operators to send and share information in real time with dispatchers.
- Automatic Vehicle Locator (AVL) technology has been installed in 600 EMS ambulances and 500 Fire Department vehicles, reducing ambulance response times by an average of 16 seconds.
- Failing radio towers at the Staten Island, Bronx, Queens, and Brooklyn Communications Offices, as well as at the FDNY Long Island City facility were replaced with new communications equipment.
- The following Fire Department's technologies have been upgraded: logging and recording system, Emergency Response System (ERS) and Box Alarm Receiving System (BARS), and the Voice Alarm system.
- 911 and 311 can now receive photos and videos.

The overall budget for ECTP is substantial—over \$1.8 billion dollars once PSAC 2 is completed in 2013. Keep in mind, though, that this investment is spread over more than 10 years and includes dozens of projects that, taken together, will ensure that the backbone of our emergency response infrastructure can reliably serve New Yorkers well into the 21st Century.

<u>Unified Call Taking (UCT)</u>

In addition to achieving standardization and redundancy, ECTP includes operations-related initiatives to reduce call times, and the quality of each response. One of the most effective initiatives being pursued is Unified Call Taking (UCT) – which lowers response times in an effort to save lives.

The first operational phase of UCT, which has cost \$19 million to date, was introduced in early May to handle fire calls and any other situation that would require an FDNY response. Prior to the introduction of UCT, 911 calls for structural fires were answered by an NYPD Call Taker, who collected caller and incident information. The Police Call Taker would then initiate a conference call with an FDNY Call Taker and repeat the information-gathering process. The FDNY Call Taker would collect similar information from the caller and forward that information to an FDNY Dispatcher, and then and only then would a response begin.

Under Unified Call Taking, improved technology and training allow the Police Call Taker to collect both NYPD and FDNY incident information and then electronically send the information to dispatchers at both agencies to send the appropriate emergency response. This means the caller only has to give the information one time to one call taker. The elimination of this redundant step for fire calls saves time in processing the caller's critical information and, accordingly, the overall response time for each call.

This reduction in call time was immediately apparent after the beginning of UCT in May. And in the seven months that have elapsed since that time, response times to structural fires have averaged three minutes and fifty-seven seconds in duration, a reduction of ten seconds from the pre-UCT call average for the same seven months in 2008, and 30 seconds lower than in 2007, before a change in dispatch procedure was made, known as pre-release.

Since UCT went live in May, we have closely monitored the new system, including instances of units being dispatched to wrong addresses, and when callers gave wrong or incomplete addresses. Before UCT, these occurrences were not systematically tracked, and we are now collecting better information than ever before and using it to improve the system.

STATEMENT OF DEPUTY CHIEF CHARLES F. DOWD COMMANDING OFFICER, COMMUNICATIONS DIVISION NEW YORK CITY POLICE DEPARTMENT

BEFORE THE NEW YORK CITY COUNCIL COMMITTEES ON PUBLIC SAFETY, FIRE AND CRIMINAL JUSTICE SERVICES, AND TECHNOLOGY IN GOVERNMENT

DECEMBER 10, 2009

Good afternoon. I would like to discuss with you the Police Department's participation in the development and implementation of the Unified Call Taking program.

Prior to introduction of Unified Call Taking, emergency calls to 911 were received by NYPD call takers who ascertained the location and nature of the emergency. If the call was reporting a fire, the NYPD call taker then used a one-touch link to conference in an FDNY dispatcher, who would essentially ask the same questions and obtain the same information from the caller, and relay the information to FDNY dispatchers. As Chief Cassano has stated, this usually meant that a caller would have to provide information to two different call takers, using extra time in situations where every second is vital. Instead, Unified Call Taking reduces the time it takes to initiate a response, by giving the NYPD call taker the responsibility of obtaining the relevant information and electronically relaying it directly to an FDNY dispatcher.

Because of the critical nature of this new role for NYPD call takers, it was imperative that the program be designed and implemented with great care by the FDNY and NYPD. Together, both agencies, with the help of DoITT, collaborated closely in designing the program mission, system requirements, and functional specifications, over the course of many months. They devised new codes and procedures to enable NYPD call takers, using the Police Department's SPRINT system, to seamlessly and electronically communicate with the FDNY's Starfire system.

Especially important, the agencies jointly developed a training plan so that the 1,300 NYPD call takers, dispatchers and supervisors would be capable of implementing Unified Call Taking citywide. Among other topics, the eight-hour training course instructed NYPD personnel regarding the new codes they were to use, the way calls were to be routed to FDNY, the importance of providing vital information using the structure of the Starfire system, the correct way to question callers to obtain critical information quickly, how best to identify and communicate special locations and situations, such as fires on bridges or trapped callers, and how to handle calls if one of the computer systems is temporarily malfunctioning.

As Unified Call Taking went live, the FDNY and NYPD continued their close collaboration, with structured weekly meetings as well as daily contact to discuss issues and

problems, share feedback, and learn from the developing experience. That feedback and experience is used to provide continuing in-service training for NYPD personnel. In fact, a new training initiative was developed in October of this year and is in the process of being conducted by both NYPD and FDNY trainers, to provide greater insight for call takers into how the information they provide is used in the field. While this training is proceeding, however, we have temporarily introduced a new procedure for UCT, in order to minimize the possibility of inaccurate information being transmitted. NYPD call takers continue to receive the calls and electronically transmit them to FDNY dispatchers, but they now also conference in an FDNY call taker as soon as they know the call concerns a fire, so that there is a second call taker on the line in real time, able to ask pertinent questions or verify the caller's information. In this way, both agencies are continuing to lower response time while increasing the accuracy of the information obtained and transmitted, as NYPD call takers become more familiar with their new role.

Our agencies are committed to continuing to work together to make steady improvement to the Unified Call Taking program, in the strong belief that UCT will serve to quicken emergency response in New York City. We would be pleased to answer your questions.



FOR THE RECORD

TESTIMONY OF

WILLIAM C. THOMPSON, Jr.

New York City Comptroller

Before the

NEW YORK CITY COUNCIL Committee on Fire and Criminal Justice Committee on Public Safety Committee on Technology in Government

OversightExamining the FDNY/NYPD Unified Call Taking System

December 10, 2009

TESTIMONY SUBMITTED BY NYC COMPTROLLER WILLIAM C. THOMPSON, JR.

FOR A JOINT HEARING OF THE FIRE AND CRIMINAL JUSTICE COMMITTEE, THE PUBLIC SAFETY COMMITTEE, AND THE TECHNOLOGY IN GOVERNMENT COMMITTEE OF THE NEW YORK CITY COUNCIL

THURSDAY, DECEMBER 10, 2009 1:00 PM

Chairman Vacca, Chairman Vallone and Chairwoman Brewer, and distinguished members of the Fire and Criminal Justice, the Public Safety and the Technology in Government Committees, thank you for this opportunity to provide testimony today regarding problems plaguing the city's Unified Call Taking (UCT) system.

The importance of a well-designed and well-functioning emergency call system to the public safety of New Yorkers cannot be overstated. Every day, our 911 response system saves lives and property and reduces crime.

Unfortunately, my office has found the development of the city's new integrated system to be an unfortunate example of poorly executed public policy. As my testimony will demonstrate, this process has been marked by huge cost-overruns, delays in delivery and poor transparency.

While the city has touted improved response times, those improvements appear questionable. The increased time taken by 911 operators, who have taken over the responsibility of interrogating emergency callers from the Fire Department, is not counted toward overall response time.

Those delays make more sense when you understand that until only recently, the majority of 911 operators had received little or no training to help them in their new responsibility of directing emergency calls to the proper emergency responders. That is unfair to both our operators and the public.

The Comptroller's office has been tracking the UCT for several years through our contract registration and review process.

The contract, which is between the Department of Information Technology & Telecommunications (DoITT) and Hewlett-Packard (HP), is for the purpose of building the Emergency Communications Transformation Program (ECTP) which is intended to modernize and link the Police Department, Fire Department, and Emergency Medical Services 911-response systems.

The term of the contract is from April 1, 2005 through March 31, 2010 and the contract amount is \$380 million. The contract's original purpose included the completion of two Public Safety Answering Centers -- PSAC I and a back-up emergency call center, PSAC II.

Because of concerns we had regarding HP's performance, on December 8, 2008, we held a meeting with DoITT at our office where the agency reported that the projected cost for PSAC I was to be \$250 million and that the excess funding of \$130 million (\$380 million less \$250 million) would not be utilized because PSAC II had been postponed.

Since last December, the cost of PSAC I has risen to \$306.5 million and the projected cost for PSAC II is estimated to be approximately \$200 million. As a result, the total cost will exceed \$500 million.

The reason DoITT gave for the postponement was that there were serious issues regarding Hewlett-Packard's ability to achieve its goals on the project.

HP's poor performance was first documented three years ago at the end of 2006, when DolTT communicated to HP specific improvement requirements across various management areas including quality, schedule and risk management.

In 2007, DoITT found that little progress had been made by HP. As recently as 2008, DoITT's evaluations of HP continued to indicate performance issues. In fact, DoITT gave HP "needs improvement" ratings in the categories of timeliness of deliverables and overall timeliness of performance.

Of further concern is DoITT's failure to post HP's poor performance evaluations in the VENDEX database. Statutorily, city agencies are required to share the results of their evaluations in the VENDEX system so that other agencies are aware of a vendor's good, or poor, performance when considering that vendor for a new contract..

By failing to make public its adverse performance findings, DoITT failed to forewarn other agencies of HP's deficiencies during the implementation of such a critical and costly City initiative.

Therefore, it is of grave concern that upon our office's request of the most recent performance evaluation for HP, DoITT responded that it was still being processed.

Given the history of performance problems at HP, we believe that it would have been prudent for DoITT to take a proactive role in managing the project by identifying and rectifying those problems before they adversely impacted the project.

Nevertheless, recent newspaper articles have reported that call takers have experienced problems with the system. A recent Daily News article dated November 20th 2009, reported that in one week there were three separate incidents where the 911 system failed to function properly.

In addition, DoITT informed us of delays caused by operational defects in software delivered by Verizon, a subcontractor on the project.

My office is concerned that the dissatisfaction expressed by key personnel that work with the new system, taken along with Verizon's reported defects, suggests that the new Unified Call Taking System cannot operate as expected.

With both New Yorkers' health and welfare and the integrity of city property at stake, there is no excuse for the kind of ineffective public policy we have witnessed over the past four years.

I appreciate this opportunity to provide testimony today and would be happy to reply to any questions you have concerning this issue and the actions of my office.

Thank you very much.

UNIFORMED FIREFIGHTERS ASSOCIATION OF GREATER NEW YORK IAFF LOCAL 94, AFL-CIO, CLC

OVERSIGHT - EXAMINING THE FDNY/NYPD UNIFIED CALL TAKING SYSTEM.

 $B\,y$ stephen cassidy

President

December 10, 2009

Good Afternoon, Chairman Vacca, Chairman Vallone and Chairwoman Brewer. Thank you for inviting me to testify on this important topic that affects safety of all New Yorkers. The \$2 billion 911 Unified Call Taking system is an abysmal failure. Recent tragedies in Queens and Brooklyn led to the deaths of civilians as a result of Firefighters being sent to the wrong address. These deadly mistakes came as a result of the new Unified Call Taking (UCT) system, or as Firefighters have come to know it <u>U-Can't-Tell</u>. Firefighting units are constantly being sent to wrong addresses, they do not know what type of calls they are going on and confusion has become the norm when responding.

There is a fundamental difference in dispatching Firefighting units as opposed to police. When someone calls 911 for a Fire or other emergency they are calling while an emergency is taking place. Getting the correct info is of the utmost importance. Time is of the essence and if Firefighters are sent to the wrong address, that can result in adding minutes to a response time. In most 911 calls to the police, it is for an incident that has already happened. It is common practice for the police to hold multiple calls at a time. They get put onto a priority list and a patrol car will respond as they become available. It is not critical to have all of the correct information ASAP. This system works for them but it does not work for the Fire Department. When someone calls for a fire, units are dispatched immediately. There is no such thing as holding calls for the next available unit. Fires grow exponentially and in as little as two minutes a small flame grows to a raging inferno. Fire Alarm dispatchers receive hundreds of hours of training to make sure they get the correct information and send out the correct units. The extra seconds Fire Dispatchers take to get the correct info often means the difference between life and death. The UCT call takers have not been properly trained to the same level that the Fire Dispatchers have. This is by no means the fault of the dispatchers, but rather the bureaucrats who decided to implement this flawed system. There is also a system of safeguards that the Fire Dispatchers have that is not

available to the UCT call takers. The few extra seconds and extra training the Fire dispatchers receive make a difference in saving lives. The old system is the accepted standard around the country because it works.

Perhaps one of the greatest myths the Fire Department and the administration has led us to believe is that response times have improved under the UCT system. In fact they have actually increased. The attached chart illustrates this false calculation. The city is no longer including the caller interrogation time which formerly was done by fire dispatchers in their calculation. This is deliberately misleading and putting the public in danger. The UFA has contended for a long time that the only statistic that matters to the department is response times. As long as one unit, any unit, is on scene under the national standard of 6 minutes, it is acceptable.

It is unfortunate that nearly \$2billion has been spent on this project and it has already proven to be a failure for Fire Department responses. The smart thing would be for the old proven system to be put back in place. This administration has proven over and over that they are not willing to admit their mistakes so we are not optimistic that they will change their minds in this case. Unfortunately their stubbornness will continue to jeopardize the safety of all New Yorkers. Prior to the implantation of UCT, a caller trapped in a fire had a better chance of getting the Fire Department to respond to the correct address. Now it's less likely that will happen. It is time to go back to the old system and give the people of New York City the protection that they pay for and deserve.

FDNY's True Response Time Unmasked

FDNY'S Pre-UCT Calculation Method

9-11 Call Time + FDNY Dispatch + FDNY Travel Time = Avg Response Time

:05 avg + :45 avg + 4:00 avg = 4:50

Under Previous System FDNY Reported Response as Only: 4:45*

*By Starting the clock only when call is sent to FDNY Dispatch

FDNY'S UCT Calculation Method

9-11 Call Time + FDNY Dispatch + FDNY Travel Time = Avg Response Time

1:15 avg + :15 avg + 4:00 avg = 5:30

Yet FDNY Reports Response as Only: 4:15*

*By Starting the clock only when call is sent to FDNY Dispatch

- FDNY Response Times Under UCT Have Gone Up, Not Down As City Contends.
- The City's Deliberately False Statistics Are Part Of An Attempt To Justify Closing Firehouses In 2010.
- The City's Enron-Style Accounting Now Raises
 Questions About Other Statistics They Are Trumpeting.



FIRE ALARM DISPATCHERS BENEVOLENT ASSOCIATION, INC.

139 Fulton Street, Room 318 New York, NY 10038 212-779-2799 Fax 212-779-2499

CITY COUNCIL PRESENTATION DECEMBER 10, 2009

BY: DAVID ROSENZWEIG, PRESIDENT

UNIFORMED FIRE ALARM DISPATCHERS BENEVOLENT ASSOCIATION

UCT – UNIFIED CALL TAKER (NYPD), UCT – YOU

CAN'T TELL????

Good afternoon Chairman Vacca, Chairman Valone and Council members at today's hearing, I am David Rosenzweig President of the Uniformed Fire alarm Dispatchers Benevolent Association, (UFADBA). I am here today at the conclusion of my career with the FDNY after Completing 40+ years as a Emergency Communication Professional working in the following Civil Service Titles Fire Alarm Dispatcher (FAD), Supervising Fire Alarm Dispatcher (SFAD), Chief Fire Alarm Dispatcher (CFAD). I have worked at every FDNY Communication office in a Supervisory Position in all 5 Boro's, FDNY Headquarters (9 Metrotech Center), PSAC1 (Public Safety Answering Center) at (11 Metrotech Center) & 1 Police Plaza (PD Communication Center). First let me start by saying that I had the Honor and pleasure of working with a group of dedicated and committed Communication Professionals who have NEVER let this city down in times of need and crisis. We have complied with the mandate of assuring every citizen receives a piece of FDNY Emergency Equipment within five minutes 99% of the time. We have the lowest Processing time in the nation with an average call of 43 seconds. We do this under the worst conditions and without wavering from our duty to this city and its citizens. In short we were doing our Job as expected of EMERGENCY COMMUNICATION PROFFESIONALS. We in fact surpass expectations, as reported in the McKinsey Report of 911, with 70% of FDNY

resources actively involved at one incident the 5 minute mandate was met and delivered citywide. This was no easy task and took and maximum effort to deliver including utilizing the 5 separate communication center in a team effort. IF IT'S NOT BROKE WHY FIX IT. On May 5th, 2009 what I will call a new level of insanity occurred, it was called <u>UCT</u> UNIFIED CALL **TAKERS** changing a system which worked without problems. It transformed a working system to at best a chaotic disaster which was designed for failure. The FDNY was aware that 911 PD Call takers required training are not capable to take fire calls on May 5th, but moved forward at CITY Hall's INSISTANCE. What has happened was predictable and not a surprise. Response times have skyrocketed, needless useless responses, Fire Department resources being misguided, and a depletion of needed resources to respond to real incidents. First Responder Incidents leave citizen without available units to respond to Medical Emergency, instead they are responding to CELL SIGHTS and wrong locations. As a result of needless responses overall RESPONSE TIMES HAVE INCREASED for the FDNY. The reported reduction in response time is **FALSE** and misleading the Elected Officials and Public. They have removed the call taker processing time and replaced it with an undocumented actual time. If this misleading information is intentional it should be referred to the Inspector General or District Attorney for Violation of the Public Officer Law. They have removed the call taker processing time - WHY. WHAT IS THE CALL TAKER (PD) PROCESSING TIME ??. HOW MANY CALLERS RECEIVE RECOEDED MESSAGE TO HOLD ON. YOU

HOW MANY CALLERS RECEIVE RECOEDED MESSAGE TO HOLD ON. YOU

DON'T WANT TO HOLD ON WHEN YOUR HOUSE IS ON FIRE. THE FIRE

DEPARTMENT NEEDS ITS OWN DIRECT DIAL SYSTEM WHICH WILL REDUCE

PROCESSING TIME AND ELIMINATE INTER AGENCY PROBLEMS

NEEDLESS AND WRONG RESPONSES DEPLETE AVAILABLE

RESOURSES

DOCUMENTATION SPEAKS FOR ITS SELF, 4000 RECORDED PROBLEMS.

WRONG LOCATION -650

(WRONG ADDRESS, WRONG BORO, NO CROSS STREETS)

VITAL INFORMATION MISSING - 700

(WRONG CROSS STREETS, NO FLOOR, NO APT NUMBER,

NO DISCRIPTION)

WRONG CODING -150

(WHY ARE WE RESPONDING (U T C) YOU CAN'T TELL)

ROUTING ERRORS – 300

(NEEDLESS RESONSES)

OTHERS - 200

VITAL INFORMATION IS MISSING CAUSING DELAYS, BY
NOT ALLOWING US TO TALK TO THE CALLER WE ARE
NOT ABLE TO ACCESS THE LEVEL OF URGENCY WHICH

WOULD NECESSITATE ADDITIONAL EQUIPMENT BEING SENT BEFORE ARRIVAL OF FD UNITS.

We are Fire Communication Professionals and have the knowledge and training to asses over the phone the need for additional FDNY resources. This assists us with lead time and to prepare for and anticipated acceleration and additional unit responses.

RETURN TO WHAT HAS WORKED, SAVE A LIFE



MICHAEL R. BLOOMBERG Mayor

MARTHA K. HIRST

THE CITY OF NEW YORK DEPARTMENT OF CITYWIDE ADMINISTRATIVE SERVICES APPLICATIONS CENTER 18WASHINGTONSTREET NEW YORK, NY 10004

NOTICE OF EXAMINATION

REQUIRED FORMS

APPLICATION FORM

EDUCATION AND EXPERIENCE TEST PAPER FOREIGN EDUCATION FACT SHEET (FAMILICALE)

FIRE ALARM DISPATCHER

Exam. No. 5035 Second Amended Notice (January 24, 2007)

WHEN TO APPLY: From: January 24, 2007 APPLICATION FEE: \$35.00

To: February 7, 2007 Payable only by money order to D.C.A.S. (EXAMS)

THE TEST DATE: The multiple-choice test is expected to be held on Saturday, April 28, 2007.

The Notice of Examination is amended to:

1. reopen filing from January 24, 2007 through February 7, 2007; and

2. change the test date from February 17, 2007 to April 28, 2007.

Candidates who filed previously need not file again.

WHAT THE JOB INVOLVES: Fire Alarm Dispatchers, under direct supervision in a Communications office or under general supervision in the field, receive and transmit alarms of fire and emergency using various systems including the Computer Assisted Dispatch System (CADS), Mobile Data Terminals (MDT), telephone, voice alarm, Emergency Reporting System (ERS), two-way radios, PC-based database programs, etc.; receive and process calls in regard to administrative issues or complaints from FDNY field units, other FDNY bureaus, City agencies and/or the public; interpret information received and use the computer keyboard to enter data into the computer for release to fire companies; determine the amount and type of apparatus, and which units to send to alarms; relocate companies as needed; adjust the number and/or type of units at fire scenes based on the condition and/or predetermined response assignment protocols; operate department radio and voice alarm systems to announce alarms and receive fire company acknowledgments or response to alarms; announce special messages and notify designated parties of incidents, as required; enter data into the computer for transmission to fire companies; receive fire company acknowledgments of response to alarms and perform related work.

Some of the physical activities performed by Fire Alarm Dispatchers and environmental conditions experienced are: speaking in a clear and understandable manner by telephone, Voice Alarm System, or radio; giving instructions to, and dispatching fire companies using a keyboard to access computer screens for initial alarm entry, reviewing data and/or inputting updates; eliciting pertinent information from callers who may be under stress; distinguishing between and acting upon indications of alarms which may be received in a Communications office in the form of lights, buzzers, bells or computer queue alert; visually observing equipment that has various colored lights which reflect changing conditions; and using a keyboard to access computer screens for reviewing or inputting updates and/or changes in data.

Special Working Conditions: Eligibles appointed to this position will be required to work rotating shifts including nights, Saturdays, Sundays, and holidays in any or all Central Office facilities. Regularly scheduled shifts are usually 12 hours in duration, however, the position may require being ordered to work beyond the regularly scheduled shift and on days off.

(This is a brief description of what you might do in this position and does not include all the duties of this position).

- THE SALARY: The current minimum salary is \$30,316 per annum. Incumbents will receive salary increments reaching \$50,127 per annum at the completion of five years employment. All rates are subject to change. In addition, employees receive holiday, night differential and overtime pay.
- HOW TO APPLY: If you believe that you meet the requirements in the "How to Qualify" section, refer to the "Required Forms" section below for the forms that you must fill out. Return all completed forms and the application fee to DCAS Applications Section, 1 Centre Street, 14th floor, New York, NY 10007 by mail only. DCAS will not accept applications in person from candidates.

HOW TO OUALIFY:

Education and Experience Requirements: By the last day of the Application Period you must have a fouryear high school diploma or its educational equivalent, and have two years of satisfactory experience, within the last five years, in one of the following categories:

- full-time paid experience as an airport or railroad traffic controller, fire alarm dispatcher in a Class "A" Fire Alarm System, or in a radio or telephone call receiving or dispatching position in an emergency communications facility dedicated to Police, Fire or EMS operations; or
- full-time paid or unpaid non-firefighting/fire dispatching experience handling the receipt of multiple, simultaneous calls and radio dispatching in response thereto in a U.S. military facility or with the motor fleet of a company, such as a car service, plumbing or oil company, or postal or express delivery service; or
- full-time paid firefighting and/or fire dispatching experience as a member of a municipal or federal fire service/department or the New York City Fire Patrol; or
- 4. service as a firefighter or fire dispatching member in good standing of a recognized volunteer fire department. To be creditable, such service will be evaluated in accordance with the bylaws established by the volunteer fire department, which must detail the minimum yearly service requirements for being a member in good standing. Written verification will be required from the highest ranking member of the volunteer fire department that this requirement has been satisfied.

Following are some examples of experience that are <u>not acceptable</u> for meeting the requirements described in 1. or 2. above: housing superintendent, hospital page operator, radio motor patrol vehicle operator (or other vehicle operators who receive and/or transmit messages over a mobile radio), hospital telephone operator, customer service representative, and airport dispatcher other than air traffic controller.

A maximum of one year of satisfactory experience will be credited for each 12 month period. Part-time satisfactory experience will be pro-rated and credited in lieu of, but not in addition to, full-time satisfactory experience during the same 12 month period.

You may be given the test before we review your qualifications. You are responsible for determining whether or not you meet the qualification requirements for the examination prior to submitting your application. If you are marked "Not Qualified," your application fee will not be refunded and you will not receive a score.

Medical Requirement: Medical guidelines have been established for the position of Fire Alarm Dispatcher. Candidates will be examined to determine whether they can perform the essential functions of the position of Fire Alarm Dispatcher. Where appropriate, a reasonable accommodation will be provided for a person with a disability to enable him or her to take the examination, and/or to perform the essential functions of the job. Drug Screening Requirement: You must pass a drug screening in order to be appointed.

Residency Requirement: Any person employed as a Fire Alarm Dispatcher must be a resident of the City of New York or of Nassau, Westchester, Suffolk, Orange, Rockland or Putnam counties.

English Requirement: You must be able to understand and be understood in English.

Proof of Identity: Under the Immigration Reform and Control Act of 1986, you must be able to prove your identity and your right to obtain employment in the United States prior to employment with the City of New York.

REQUIRED FORM:

- Application for Examination: Make sure that you follow all instructions included with your application form, including payment of fee. Save a copy of the instructions for future reference.
- Education and Experience Test Paper: Write your social security number, the examination title and number in the box at the top right side of the cover page. Fill out Sections A, A.1, A.2, A.4, and B. This form must be filled out completely and in detail for you to receive your proper rating. Keep a copy of your completed Education and Experience Test Paper for your records.
- Foreign Education Fact Sheet (Required only if you need credit for your foreign education to meet the education and experience requirements): If you were educated outside the United States, you must have your foreign education evaluated to determine its equivalence to education obtained in the United States. The services that are approved to make this evaluation are listed on the Foreign Education Fact Sheet included with your application packet. When you contact the evaluation service, ask for a "document-by-document" (general) evaluation of your foreign education. You must have one of these services submit its evaluation of your foreign education directly to the Department of Citywide Administrative Services no later than eight weeks from the last date for applying for this examination.

THE TEST: You will be given a multiple-choice test. Your score on this test will be used to determine your place on an eligible list. You must achieve a score of at least 70% to pass the test. The multiple-choice test may include questions on understanding written and verbal information; communicating written information to another person; remembering new information; combining separate pieces of information to form a general conclusion; applying general rules to a specific situation; understanding the order in which things should be done; and other related areas.

If you pass the multiple-choice test you will also be given a qualifying practical test to determine if you meet the skill requirement of keyboard familiarity. In order to pass this test you must be able to type accurately at a minimum speed of 50 keystrokes (10 words) per minute after errors are deducted.

- ADMISSION CARD: You should receive an Admission Card in the mail about 10 days before the date of the test. If you do not receive an Admission Card at least 4 days before the test date, you must go to the Examining Service Section, 1 Centre Street, 14th floor, Manhattan, to obtain a duplicate card.
- THE TEST RESULTS: If you meet the education and experience requirements, and pass the multiple-choice test and qualifying practical test, your name will be placed in final score order on an eligible list and you will be given a list number. You will be notified by mail of your test results. If you meet all requirements and conditions, you will be considered for appointment when your name is reached on the eligible list.

ADDITIONAL INFORMATION:

Selective Certification for Foreign Language: If you can speak a foreign language, you may be considered for appointment to positions requiring this ability through a process called Selective Certification. If you pass a qualifying test, you may be given preferred consideration for positions requiring this ability. Follow the instructions given to you in the multiple-choice test booklet on the day of the test to indicate your interest in such Selective Certification.

SPECIAL TEST ACCOMMODATIONS: If you plan to request special testing accommodations due to disability or an alternate test date due to your religious belief, follow the instructions included with the "Application for Examination."

The General Examination Regulations of the Department of Citywide Administrative Services apply to this examination and are part of this Notice of Examination. They are posted and copies are available in the Applications Center of the Division of Citywide Personnel Services, 18 Washington Street, NY, NY.

The City of New York is an Equal Opportunity Employer Title Code No. 71010; Fire Alarm Dispatching Occupational Group

UNIFORMED

FIRE DEPARTMENT, CITY OF NEW YORK

FIRE OFFICERS

LOCAL 854, INTERNATIONAL ASSN. OF FIREFIGHTERS, AFL-CIO

ASSOCIATION

225 B R O A D W A Y * N E W Y O R K, N. Y. 10007 * S U I T E 4 0 1 T E L: (212) 293 – 9300 * F A X: (212) 292 – 1560

TESTIMONY BY CAPTAIN ALEXANDER HAGAN, PRESIDENT
UNIFORMED FIRE OFFICERS ASSOCIATION
BEFORE THE FIRE AND CRIMINAL JUSTICE SERVICES COMMITTEE, THE
PUBLIC SAFETY COMMITTEE AND THE TECHNOLOGY IN GOVERNMENT
COMMITTEE OF THE NEW YORK CITY COUNCIL
DECEMBER 10, 2009

Speaker Quinn, Chairpersons Vacca, Vallone and Brewer and Members of the Fire and Criminal Justice Services Committee, the Public Safety Committee and the Technology in Government Committee, thank you for the opportunity to testify today on this life-or-death issue of rapid response to more than 50,000 fires annually in New York City.

My name is Alexander Hagan, and I'm a Captain in the New York City Fire Department. I also serve as the President of the Uniformed Fire Officers Association, a union of approximately 2,500 lieutenants, captains, battalion chiefs, deputy chiefs, supervising fire marshals and medical officers of the FDNY.

Last month, three people died in a fire in Woodside, Queens. Several days later, three more people, including two toddlers, died in a fire in Brooklyn. In both instances, first responding fire companies were sent to wrong addresses by a fatally flawed response system.

It took six civilian deaths to move the city to action, and a temporary adjustment was instituted unilaterally by the administration (without input from Fire Officers...the end users of the information) that improved the existing system somewhat, but is by no means the final answer.

Prior to the adjustment, calls for help were being handled by police call operators, who then transmitted the barest minimum of information to a Fire Dispatcher. The new Unified Call Taking system, in operation since May, repeatedly sent fire units careening through the city's streets, often with little more information than an address. Too many times, it turned out to be the wrong address.

Now a Fire Dispatcher, who had previously been treated as a clerk for the UCT operators, is conferenced in on reports of a fire or other emergency handled by the FDNY. It is an improvement, but it is not the best this city of 8.3 million people should have to settle for.



-AFFILIATED WITH-

Before I go any further with two positive proposals, I must set this record straight on claims made by City Hall and Fire Headquarters that response times to Structural Fires are at record low levels. For instance, the Fire Department claims the citywide response time in October was 3 minutes and 56 seconds (3:56). That is a bald-faced lie. It is statistical trickery at its despicable worst.

For as long as we can remember, response time was calculated from the moment the Fire Dispatcher got the call. In the past, the Dispatchers averaged 42 seconds to assemble vital information before assigning units to the scene. We have no idea of how long the UCT operators were taking to assemble information, but throughout the six months of operation under the UCT system, that information-gathering time was not included in the FDNY's phony statistics.

The people were not getting a faster response. They were getting a snow job through May, June, July, August, September and October. We can only hope the November statistics are honest.

With that said, the UFOA wishes to offer two positive suggestions, a short range solution to this problem, and a long range solution as well.

The short range solution is for the UCT caller to fast-track any emergency handled by the FDNY to a Fire Dispatcher without delay. The Fire Dispatchers are an experienced, integral part of the FDNY response. And their mistakes are so infrequent, most firefighters and fire officers can't remember the last time they made one.

The long range solution would require agreement by the government of New York City, helped along by a large dose of common sense. The Fire Department needs its own emergency call number. We suggest a 711 call number for any report of a fire. The call would be handled by the best in the business---our own Fire Dispatchers.

We already have the 911 system for police calls, and during the eight years of the Bloomberg Administration, we have seen a 311 system successfully implemented, and now a 511 call number for transportation questions and answers. Frankly, the UFOA, although it sees the value of a call system that gives the caller the timetable for the next train out of town, feels a much higher priority should be placed on the safety of the people who live, work and visit our beautiful city. The point is that if we can do all these easy-to-remember telephone numbers for everything but fires, the Fire Department should also be brought into the 21st Century, with all its technological wonders.

The Uniformed Fire Officers Association deeply appreciates this opportunity to testify here today, and we hope the City Council will enact legislation to create a 711 number for reports of a fire. We can guarantee rapid, responsible operations that will save lives, the lives of our children, of our husbands and wives, of our mothers and fathers, of our friends, of our families. This real improvement will also save property. Property is an important part of the tax base of this City and therefore will also save precious resources. Saving lives and property is the mission of the FDNY. All of the members of this Department place our lives on the line each and every day to achieve that mission.



Testimony of Alma Roper Executive Vice-President, Local 1549, District Council 37, AFSCME, AFL-CIO

Before the Committees on Fire and Criminal Justice and Technology in Government December 10, 2009

Good afternoon Chairperson Vacca, Chairperson Brewer, Chairperson Vallone, and members of the Fire and Criminal Justice, Technology in Government and Public Safety Committees. Thank you for the opportunity to testify today regarding the Unified Call Taking (UCT) System.

My name is Alma Roper and I am the Executive Vice-President of Local 1549 of District Council 37 (DC 37). Local 1549 represents more than 18,000 clerical-administrative employees in almost all city agencies and more than 1,200 Police Communication Technicians and Supervising Police Communication Technicians assigned to the city's 911 system.

Today, I am speaking on behalf of the 1,200 members, colleagues and friends who staff the 911 call center. Police

Communication Technicians are the first responders for thousands and thousands of our city's residents and visitors.

Seven days a week, 365 days a year, my members are there – receiving approximately 13 million calls for assistance annually. Prior to holding office at the union, I devoted twenty years of service to the citizens of New York as a 911 calltaker, dispatcher and supervisor.

When hired, a 911 operator goes through an extensive eight (8) weeks of training. This training consists of six (6) weeks of classroom training where operators learn policies, procedures and approximately 477 emergency codes and 20 to 30 fire codes. The other part of the training is two (2) weeks of "hands-on" training where new operators take calls while experienced operators listen in. Upon the completion of training, the operator goes "solo" and handles all emergency calls on his or her own.

911 personnel prove themselves time and time again. This was certainly displayed during the tragic events of September 11, 2001. They also rise to the occasion during blackouts, snowstorms and all major events in the City of New York.

Prior to the Unified Call Taking system implementation on May 4, 2009, a 911 operator would receive a fire call and immediately transfer the call to a fire dispatcher. The 911 operator would stay on the line as the fire dispatcher questioned the caller and would input into the system all pertinent information supplied by the caller.

On May 4, 2009, the city changed over to the Unified Call Taking system, which meant that the 911 operators would handle all fire calls in addition to all other emergency calls.

In recent weeks, a rash of incidents involving delayed response time have resulted in a misleading focus on human error when, in fact, the focus should be on a Unified Call Taking system that is unified in name only. FDNY and NYPD recently made modifications to that system yet, the problems today are the same ones that became apparent in the wake of the events of September 11, 2001, that sparked efforts to facilitate communication between New York's premier emergency response agencies. Unfortunately, the City still has work to do in that department.

With the design and implementation of any system of this magnitude, there are issues that need to be resolved and problems that need to be corrected. The Unified Call Taking system is no different. There is no doubt that the police and fire departments want to optimize emergency services in this A major stumbling block to accomplishing that goal is city. due to the fact that the Police Department's SPRINT system Fire Department's and the **STARFIRE** system are incompatible. Another major stumbling block could be the

failure to tap the first hand experience, knowledge and expertise of the men and women who use the system rather than allowing them to become the targets of misleading attacks.

Local 1549 members who work as 911 call takers, dispatchers and supervisors have years of experience under their collective belt. Yet, many are afraid to speak out about the system even though they are being blamed for its flaws. 911 calltakers, dispatchers and supervisors are dedicated Civil Servants who take their jobs as New Yorkers' safety net and life line very seriously. These attacks have added an additional level of stress to a job that is already highly stressful and demanding.

It is time to stop placing blame and to get down to the business of reviewing the efficiency and effectiveness of the Unified Call Taking System with input and assistance from those who operate the system. In the interest of the public's safety, improving the public's awareness and improving the system are critical. When it comes to emergencies, especially fire calls, every second counts. Lives are at risk.

Thank you again for the opportunity to testify today. I will gladly take any questions you may have.

Testimony of Lillian Roberts Executive Director of District Council 37, AFSCME, AFL-CIO

Before the Committees on Fire and Criminal Justice and Technology in Government December 10, 2009

Good Afternoon. I would like to take this opportunity to thank the Chairs of all three committees and committee members for holding this important hearing concerning the 911 Emergency Response System.

My name is Lillian Roberts and I am the Executive Director of District Council 37 representing 125,000 active employees and 50,000 retirees.

Our members are the employees working at the 911 call centers for both the Police and the Ambulance emergency response systems and providing supervision to 911 call center employees. We also have members who work in support functions such as maintaining the computer systems and providing technical development for new aspects of this vitally important public safety function. In total, we have at least five DC 37 locals with members involved in trying to provide the fastest and most accurate dispatching of emergency services to the city.

It hurts DC 37 members, and it hurts me personally, when I see reports in the papers and on TV reports that the city is blaming DC 37 members for recent problems with the 911 system. I will state for the record that the problems reported in the media about delays in dispatching and mistakes in dispatch reports have nothing to do with DC 37 members. All of

f"

the shortcomings that have led to this very dangerous situation have to do with changes put in place by City Hall. These changes were done with little or no consultation with our union, or the DC 37 members who know and operate the system. This culture of mistrust of the rank-and-file employees must stop. In the past, these practices have led to waste of our taxpayers' dollars, but now this mistrust is putting the public safety at risk.

The Emergency Transformation Communication System was announced over six years as a means to reduce redundancies and reduce response time. Based on our experiences, I am here to tell you that the transformation has failed. More and more reports are coming out from the Fire Department and from the general public on the failures by contractors to fix the problems with the 911 system.

Our union tried to address some of the problems before they occur by demanding proper training before the system was put into use. However, there are other problems we cannot address because the City, in its culture of mistrust, keeps many aspects of system development secret.

Most recently we saw a delay in the response to a fatal fire in Woodside, Queens. Immediately City Hall put out a press release stating that the delay was due to human error. This was an incomplete assessment, which avoided looking at the flawed computer system. When we investigated the incident we found that our 911 operator attempted to correct the address within 35 seconds of the first input report, but the system did not allow the correction. The initial dispatch was further delayed by the flawed system, which generated a whole new report when a correction was made.

Valuable minutes were lost while a second fire company was dispatched to the proper address. This is just one of many delays that occur due to the failure of the new system which cost the City over \$380 million. In a two week period in November 2009 the 911 system went down three times requiring operators to improvise to get dispatches out. I am proud to say, these operators met the challenge.

Our members take great pride in their work. They are dedicated professionals. They know people's lives are on the line when these dispatches come in. Our members live in these communities and they have a stake in getting the information out correctly and quickly. They take this work seriously because it could very well be their family or friends whose lives are at risk.

Billions of dollars in funding from different sources went into this new system. The city should always spend wisely in order to get the most for the taxpayer's dollars. I am requesting that the City Council demand an audit of the spending for this program. I further recommend that an investigative committee be created to look into the whole 911 process and see where the Mayor and his highly paid contractors screwed up on this new system. I have also requested a federal investigation, since Homeland Security funds were used to create this new system. I will now turn this over to Henry Garrido to give the City Council more details on the terrible waste of funds and what a dangerous a situation the current flawed emergency response system has created despite the billions of dollars being spent.

Testimony of Henry Garrido Assistant Associate Director of District Council 37, AFSCME, AFL-CIO

Before the Committees on Fire and Criminal Justice and Technology in Government December 10, 2009

I am Henry Garrido, Assistant Associate Director of District Council 37. Our union's mission is to represent our members and to work with management for a more effective and efficient municipal government. The present breakdown of the 911 emergency response system is both alarming and disturbing to any New Yorker.

I would like to take an opportunity to share with you the problems we have found with the ECTP Program from the time of procurement to the implementation of its various components.

In 2003, the Bloomberg administration decided to hire iXP to work toward merging the two systems. Soon thereafter iXP withdrew and HP was awarded a \$380 million contract, even though the city had reservations about HP's ability to properly do the project. Later it was discovered that the Canadian government had sued HP for failure to properly complete a large project. The lawsuit awarded the Canadian Government a large settlement. The city's awarding of the contract to HP was due to a flawed procurement process that used limited bidding pool. During this time, not once did the city ever consider doing the work in-house using DoITT staff. Some of the programmers for HP were getting paid over \$200 per hour while our own programmers get paid \$50 an hour plus benefits.

What is really disturbing about this whole process was that later on we discovered, through news reports, that both former Commissioner of DoITT Gino Menchini and First Deputy Commissioner Larry Knafo, the two top officials at DoITT who were both involved in the bidding process were now working for the companies contracted to do the merger. This leads us to believe that not only is the bidding process flawed, but that there is little if any oversight on the whole contracting out of work, and that the Conflict of Interest Law, although well applied to lower-rung workers, seems not to hold former Commissioners and Deputy Commissioners to the same standard.

During this development stage of the project neither our union nor our members were contacted for our input. Even though we have computer programmers in Local 2627, technical personnel in Local 375, and dispatches and their supervisors working in Local 1549, 2507 and Local 3621, no real consultation with in-house staff was ever performed. The city has at it disposal hundreds of dedicated employees who only want to see a better system put into place. But as we have seen time and time again, the Mayor has no use for consulting with the present workforce regarding ideas that will save money and maintain the safety of the city.

Never since the opening of the 911 system in New York City in 1968 has the system had such frequent breakdowns. It is unheard of to have the system go down three times in two weeks. And now, after frequent complaints from FDNY personnel, we are seeing the public being put at risk. Again, the warning signs were there but the Bloomberg administration

ignores the warning of the worker on the front line. As long as the proper PR could be spun to the press, all was right with the city.

Our union will be calling for an investigation into this matter. We ask the City Council to request a thorough audit of the process and of how those funds were spent on a failed system. And as DC 37 has pointed out many times that most of the contracting out did not produce savings or help bring in work products that result in higher productivity.

We ask that this body exercise it powers, granted by the City Charter, to investigate this matter. It is not only about saving money, but also about saving lives.

THE CONSOLIDATION OF EMERGENCY DISPATCH IN NEW YORK CITY



DOMINICK R. DERUBBIO

Table of Contents

Table of Contents	2
Forward	3
Overview of Emergency 9-1-1	4
Metrotech Center	4-5
Previous 911 System	6
Current 911 System	7
Revamped 911 System	8-11
Appendix A (Contractor/Agency List)	12

Forward

The information contained within this report is a product of countless hours of interviews with New York City emergency dispatchers and New York City firefighters. The objective of this piece is to bring attention to the lack of emergency planning within New York City in regards to the consolidation of the Emergency 9-1-1 system.

Dominick R. DeRubbio holds a degree in Fire and Emergency Service(BA) from John Jay College and is currently enrolled in the Protection Management(MS) program with a concentration in Emergency Management. In 2006 Dominick volunteered with the Office of Emergency Management and was assigned to the ECC (Emergency Communications Center). In 2007 Dominick also volunteered with the New York City chapter of the American Red Cross, he was involved in emergency planning and exercises. For the past four years Dominick has held the position of Senior Fire/Emergency Preparedness Manager for a private company located in Queens, New York City. While retaining this position Dominick conducted Emergency Action Plans/Fire Safety Plans and trained building occupants in regards to fire safety/emergency response.

Overview of the Emergency 911 System

On May 4th 2009, New York City began its first day of the Unified Call Taker program. The Unified Call Taker Program is a new protocol being used by Emergency 911 dispatchers. Mayor Bloomberg is currently consolidating all of New York City's emergency dispatchers into one building in downtown Brooklyn, 11 Metrotech. The consolidation at 11 Metrotech as well as the building's proximity to other sensitive structures raises many serious safety concerns.

Metrotech Center

The location in question is Metrotech Center, located in downtown Brooklyn. Metrotech Center is a complex of buildings that occupies ten blocks in the downtown Brooklyn area. With over 15 buildings Metrotech houses a majority of the communications for emergency agencies in New York City, it also contains numerous financial institutions. Buildings located within Metrotech Center are labeled numerically, for example, 9 Metrotech is FDNY Headquarters.

New York City's emergency dispatch system (911) is divided between three different agencies, the FDNY, NYPD and EMS. When originally constructed, the FDNY had five dispatch offices in each of the five boroughs. Currently the FDNY dispatch offices are in the process of being consolidated in 11 Metrotech. The FDNY dispatch has no single backup location but will use other offices if one office was to go offline. The NYPD has their main dispatch system at 11 Metrotech and has had it there for years. If an incident were to occur at 11 Metrotech the NYPD dispatchers would be bused to a backup site located at 1 Police Plaza in Manhattan. Lastly, EMS dispatch is currently located at 1 Metrotech, their backup is in 9 Metrotech, only blocks away. Another EMS backup is slated to open on Empire Boulevard, Brooklyn, in the future. It should be noted that 9 Metrotech is also FDNY headquarters. The FDNY's top brass are in this building most of the week. Also located in 9 Metrotech is the Fire Department Operations Center (FDOC). The FDOC is a command center within 9 Metrotech where critical information is collected and dispatched to firefighters in the event of a large scale incident. Lastly, it is important to note that 8 Metrotech is one of the two central communications hubs used by the 9-1-1 system. This building is operated by Verizon Communications.

As discussed previously, Metrotech Center has many sensitive locations, one should also note that the Office of Emergency Management (not a part of Metrotech Center) is located only blocks away. The below diagram shows a clearer picture of Metrotech's sensitive structures and it's proximity to the Office of Emergency Management.

Layout of Metrotech Center

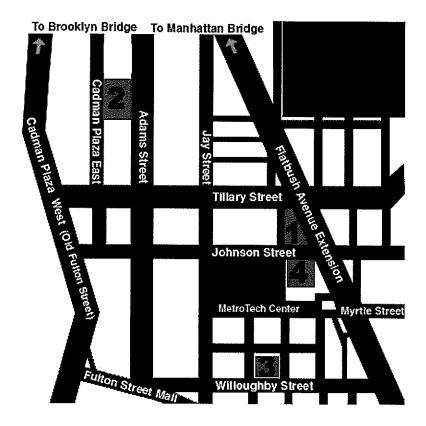


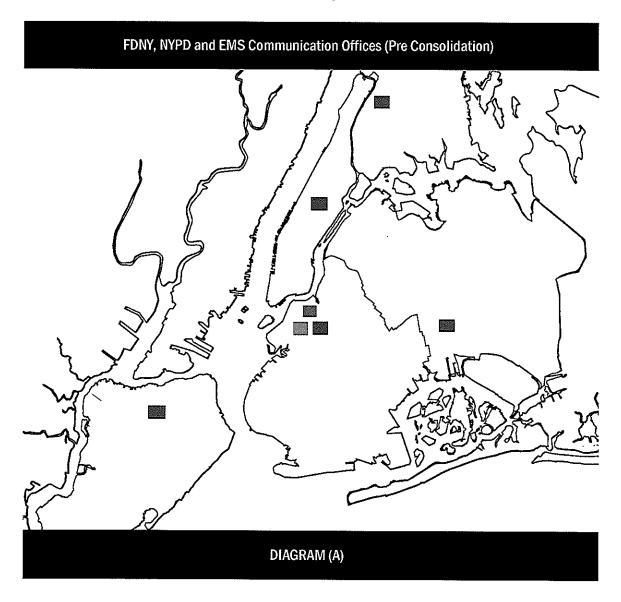
DIAGRAM (D)

- 1-11 Metrotech also known as PSAC1
- 2-New York City Office of Emergency Management
- 3-Verizon Communications
- 4-9 Metrotech also known as FDNY headquarters

The New York City Office of Emergency Management operates as a key agency when multiple New York City agencies are responding to a large incident/disaster in New York City.

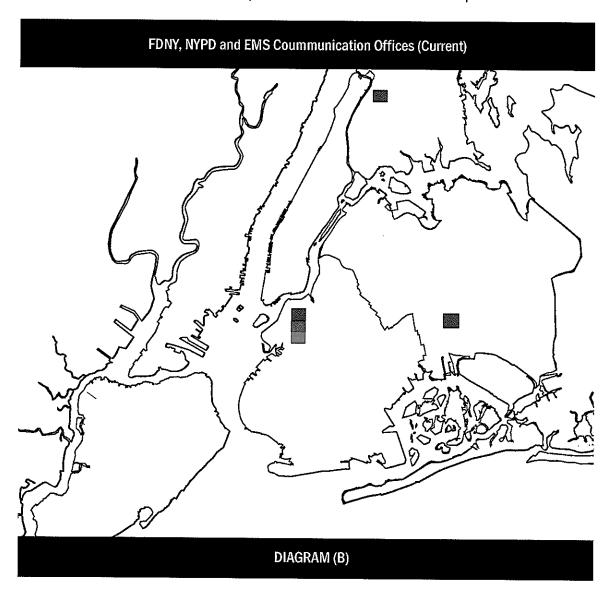
How the previous 9-1-1 system worked (Pre May 4th 2009)

Prior to May 4th (under the previous 9-1-1 system), when a caller in distress made a call to 911, it was routed to 11 Metrotech (NYPD's main dispatch). The dispatcher, depending on the emergency, would do one of three things: assign the call to an NYPD unit, transfer the call to one of the FDNY borough dispatch offices, or transfer the call to EMS dispatch. (Please note that the red squares in the following diagrams represent FDNY communication offices, the blue squares represent NYPD communication offices and the green squares represent EMS communication offices.)



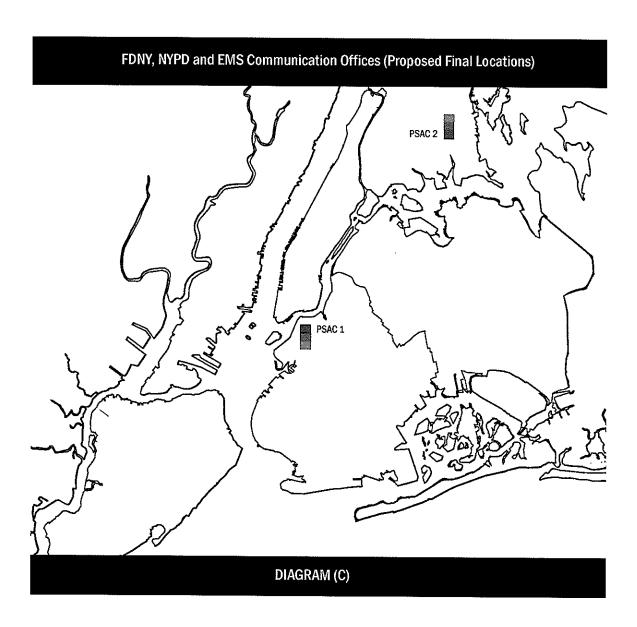
How the 9-1-1 system works presently (Sep. 30th 2009)

When the transformation began, FDNY Brooklyn dispatch, FDNY Staten Island Dispatch and FDNY Manhattan dispatch were all moved. However, all were not moved to 11 Metrotech. FDNY Manhattan and Staten Island are presently stationed at 11 Metrotech. FDNY Brooklyn was shutdown and is grouped with FDNY Queens who's office was not shutdown. It was planned that FDNY Brooklyn dispatch would be moved to 11 Metrotech from Queens at the end of September. The move never came to fruition due to problems with the phone system (STARFIRE). The original FDNY Bronx dispatch and the original FDNY Queens dispatch are the only two offices that are left open.



How the new system will work and the issues

<u>Backup</u>-Under Bloomberg's revamped 9-1-1 system there will be two 9-1-1 call centers. The first 9-1-1 call center also known as PSAC 1, is 11 Metrotech. PSAC 1 went live on May 4th 2009. The second center is PSCAC 2, which will be located in the Bronx. PSCAC 2 will serve as the backup 9-1-1 in the event 11 Metrotech has a failure. Once PSAC 2 is fully operational, both centers shall share the load of the city's 9-1-1 calls. One should note however that PSAC 2 will not be operational for another 3 years. New York City will not have a unified backup 9-1-1 call center for three years. That being said, the lack of a unified backup call center in place would undoubtedly affect the continuity of operations in the event of a terrorist attack at 11 Metrotech.



<u>Dispatchers</u>-The clustering of the agencies isn't the only issue that came out of the consolidated system. Under the new dispatch system, NYPD dispatchers will take calls that the Fire Department should be handling. Most FDNY dispatchers have more than one hundred hours of training and years of experience. The NYPD dispatchers were only given six hours of training. Thus, the transferring of information from one agency to another is likely to pose a problem. For example, if a person called 9-1-1 for a fire under the old system, the NYPD dispatcher would transfer the caller to an FDNY dispatcher. Under the new system, the FDNY dispatcher will receive a computer message leaving the dispatcher to waste precious time sorting through needless information when he or she could be speaking directly to the caller to get additional necessary information that the NYPD may have overlooked.

<u>Response Times</u>-. When 9-1-1 was called to report a fire under the old system, the NYPD dispatcher had to immediately transfer the caller to the FDNY Dispatch. Under the new system the NYPD dispatcher enters information into a computer and then transmits a computer-generated message to the FDNY dispatchers. The new FDNY response times for units will be based on <u>when the FDNY receives this message from the NYPD</u>, leaving a serious question unanswered: How long will it take the NYPD dispatcher to transfer the call to FDNY dispatch now that the computer messaging system has been integrated?

Another major issue with the new system is that fire-related calls are being batched together with NYPD-related calls. This will increase response times. The already overloaded NYPD dispatchers may receive a call, queue the call and then send it to FDNY dispatch. Response times will not change to the public, but in actuality they will go up because the city has altered the procedure in which they measure response times. The city can report efficient response times but only because they altered the manner in which they are measured. The city isn't fooling anyone. Firehouse closings coupled with increased response times is a recipe for disaster.

<u>People Trapped</u>- Under the old dispatch system an FDNY dispatcher was able to speak to a caller over the phone and obtain critical information from the caller. Under the new system the NYPD will conference in a caller if they, the caller, state that they are trapped. This poses many issues. If the caller knows of other trapped civilians why should an FDNY dispatcher have to scroll through a computer based message to locate this information? FDNY dispatchers should be able to tell firemen that there are trapped people at the fire they are responding to. Responding to a fire and knowing that there are people trapped is valuable information to firefighters.

<u>Address consolidation-</u> The three dispatch systems operate under three different cross street databases. This means one cross street in the EMS or NYPD system may not be the same in the FDNY system. If the integration is not done properly dispatchers will be sending fire trucks to conflicting locations. Incidents similar to this have already been reported. Under the old system the FDNY had STARFIRE, EMS used a system called EMS CAD and the NYPD used a system called SPRINT.

<u>Wrong Response-</u> Under the new system NYPD dispatchers are unaware of basic FDNY response procedures and it is showing. It has been reported that full hazmat responses are being assigned for simple carbon monoxide leaks. The city needs to find out where the miscommunications are and fix them before someone gets injured or loss of life occurs. It has also been reported that firefighters are receiving little information before arriving on scene or in some cases arriving on the scene twenty minutes after the NYPD has arrived.

<u>Financial Costs</u>- It has been reported that the new Emergency 911 system is going to cost over \$1.5 billion dollars. The city is spending \$1.5 billion dollars on a new system, however one should note that the FDNY dispatch offices still need to remain open due to critical equipment stationed within them. They also need to remain staffed by at least one person so that emergency calls may be dispatched to volunteer fire companies.

<u>NYPD Control-</u> The 911 system is currently controlled by the NYPD. When a caller calls 9-1-1, the NYPD will make the decisions as to where calls will be directed, what agencies will respond, etc. After September 11th 2001, New York City's Office of Emergency Management introduced the Citywide Incident Management System (CIMS). OEM outlined what emergency agencies would be the lead agency at different types of incidents on paper, this should also be instituted within the 9-1-1 system. Only by granting OEM complete control of the 9-1-1 system will a completely unbiased system exist.

<u>Chicago-</u> A few years ago Mayor Bloomberg visited Chicago's Emergency 9-1-1 Center. After liking what he saw, Mayor Bloomberg decided to model New York City's 9-1-1 system after that of Chicago. On March 27th 2009, the Chicago Sun Times reported that 9-1-1 calls were "vanishing" off of the screens. The same contractor that was in charge of the Chicago 9-1-1 is now overseeing New York City's 9-1-1 system, Hewlett Packard.

Admitting error- After sending fire units to wrong locations for months, the FDNY finally admitted error this past month and made a promise to implement temporary call taking procedures to rectify any issues. Under the new protocol implemented on November 24th 2009, the UCT-911 dispatcher is now required to conference in an FDNY dispatcher to listen to any fire-related calls. On November 26th, two days after the new protocol was implemented, fire units responded to a reported fire in Queens at 535 Seneca Avenue. The fire was actually in a completely different borough. The fire was in Brooklyn at 535 Snediker Avenue. How are UCT-911 dispatchers dispatching fire units in the wrong borough? It should be noted that there have been various incidents similar to this since November 24th 2009.

	A	В	C D	E	F
1		Com	pany vs	F	Product
2			pany 10		
3		Company	m · pr		Product(s)
4					
5	1	PURVIS		1	Voice Alarm
6		The second commence of		2	ERS
7		A # 1 A A A A A A A A A A A A A A A A A		3	EMADS
8				4	MIS
9				5	hardware maintenance
10	·	ter you reference unknown them a knowledge to homeometer and the form the company terms of the service and the		6	instant playback recorders
11		** ** *** *** *** *** *** *** *** ***			
12	2	Verizon	The second section of the section of th	7	VESTA (hardware and lines)
13					
14	3	Plant CML		8	VESTA (software)
15		- province the second case was a second case of the			
16	4	Hewlett Packard		9	Network
17					design
18	tendrens (da von dus				- Notes
19		City Agency			Responsibility
20		77) 999 17da#897 7-551 80 5da#shiddamidda addisamida ad			
21	1	DOITT		1	radio system
22		a sa		2	channel 16
23				3	11 Metro Tech
24					
25	2	DDC		4	oversite of construction
26					
27	3	FDNY		5	final approval
28	MANAGANTHICEST.	Profit Links works growing spanners, spans spans spans profit pro		LED MODELLE STORMAN	Throwse

· i	Appearance Card		
I intend to appear an	ad speak on Int. No.	Res.	No
(in favor in oppos	ition	
	Date:		
Day (OSGRAVE, COMMIS	CINIFP	
	USGILAVC, COMMIS	31000	<u> </u>
Address:		_,	
I represent:	<u> </u>		
Address:			
A CALL DESCRIPTION OF THE PARTY	TYNIAN THE		ng Militerania at mananana at mananana mananana mananana mananana mananana mananana mananana mananana mananana Manananana
	THE COUNCIL		·
THE	E CITY OF NEW	YORK	
	Appearance Card	7	
I intend to appear an	d speak on Int. No. 1053 =	Res.	No
	in favor 🔲 in oppos	12 /8/09	
		110/8/01	
Name: Sheeling	(PLEASE PRINT) Feinberg		
Address:			
I represent: New Yo	releve he Parke	-	
1 represent: 1400 (ingh Ac		
Address: 335 Ox		AND THE RESERVE	and the second of the second
**************************************	THE COUNCIL		14,6 # 15
THE	CITY OF NEW	YORK	
1 11		 	
·.	Appearance Card		
↓ ~ I intend to appear ap	nd speak on Int. No.	Res.	No
I filtend to appoint	📘 in favor 🔃 in oppos	ition	
	=		10-09
	(PLEASE PRINT)	FA	X
Name: Deputy	(PLEASE PRINT) Chief Charles Police Plaza	1, 20	<i></i>
Address:	rolice MAZA		
I represent: NY	/PD		·
Address:			
	lete this card and return to the	e Sergeant-at	Arms .
T tease comp.			

Appearance Card
I intend to appear and speak on Int. No Res. No
in favor in opposition
Date: 12/10/08
(PLEASE PRINT)
Name: Cillan Marts
Address: (2) Barclay ST M NY DOD!
Name: Cillian Roberts Address: (25 Barclay St M M 10007) I represent: Fruitin Dructor, DC 37
Address:
THE COUNCIL
THE CITY OF NEW YORK
4
Appearance Card
I intend to appear and speak on Int. No Res. No
in favor in opposition
Date: 12/10/08
Name: Henry Garrido
Address: 125 Barcley Street M 10007
I represent: Assistant Associate Dorcetor, DCD7
Address:
Please complete this card and return to the Sergeant-at-Arms

	Appearance Card	
= :	speak on Int. No in favor in oppositi	
Name: David Address: 139	PLEASE PRINT) ROSENZWEI FULTUN St 5 ACAM DISP	
I represent: ///O	ACAM WISP	
THE	THE COUNCIL CITY OF NEW Y	YORK
-	Appearance Card speak on Int. No in favor in opposit	
Address:	- PRESFORNT	
Address:	A control of	

	Appearance Card	
*I intend to appear and	speak on Int. No.	
	in favor	
		12/10/09
Name: CAOT	(PLEASE PRINT) - AL HUGA	<i>)</i>
Address:		
I represent: VMS	dent - Uniformed	Fin Officers
Address:	As	sociation
•	THE COUNCIL	
THE	CITY OF NEW Y	YORK
!	Appearance Card	
·		J
I intend to appear and	speak on Int. Noin favor in opposit	
		10/10/09
	(PLEASE PRINT)	
*	asali	
	rningstar Rd. Sto	aten Is), NY (030)
I represent: Myse	1+	·
Address:		
	THE CAINCII	The second secon
TITE	CITY OF MEW 1	VADIV
IHE	CITY OF NEW	IUKA
	Appearance Card	
I intend to appear and	speak on Int. No.	Res. No
	in favor in opposit	
	Date: _	
Name: SALVATO	(PLEASE PRINT) RE CASSAND, «	ano e ara-
	1 C130/100; C	mer or vem.
Address:	<u> </u>	
I represent: TON		
Address:		
Plause complete	this aged and seture to the S	

	Appearance Card	
I intend to appear and	speak on Int. No.	Res. No.
- -	in favor in opposition	
	Date:	
	(PLEASE PRINT)	<u>.</u>
Name: CHARLE	5 Down, Chief	
Address:	MMANDING OFFICER,	COMMUNICATIONS
I represent: MPT	7	DINISIEN
Address:	•	
		, mgs
	THE COUNCIL	,
THE	CITY OF NEW YO	ORK
	Appearance Card	
I intend to appear and	speak on Int. No.	Res. No
	in favor	
	Date:	
F. CV	(PLEASE PRINT)	
Name: LD SK	YLER.	
Address:	·	
I represent: DEPUT	Y MAYOR FOR C	PERATIONS
Address:		
	THE CALINCH	The second secon
	THE COUNCIL	0 TO 11
THE	CITY OF NEW YO	ORK
-	Appearance Card	
T:	anask on Int. No.	Res. No
I intend to appear and	in favor in oppositio	
September 1		12/10/09
	(PLEASE PRINT)	
Name: /omi	nick DeRuk	bio
Address: /Û	Glenwood Ave	
I represent:	nready New	York
_	4	
Address:		. 4
Please complete	e this card and return to the Ser	geant-at-Arms