

**Federal Building and Fire Safety Investigation  
of the World Trade Center Disaster**

**Project #8,  
Fire Service Technologies and Guidelines**

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# Data Collection Agreements [October 28, 2003]

- NIST and The City of New York

Agreement allowing NIST to inspect the 911 emergency telephone tapes that were recorded during the terrorist incident on September 11, 2001 and inspect transcripts of 500 FDNY interviews conducted just following the incident

- NIST, The National Commission on Terrorist Attacks Upon The United States (the 9-11 Commission), and The City of New York

Agreement allowing NIST to interview a total of 125 city employees, drawn from FDNY and NYPD

# Data Collection

## Data Sources

- FDNY, PANYNJ, NYPD, Published accounts and data

## Types of Data Being Collected

- Documentary
- Photographic [photographs and video]
- Electronic [audio recordings]
- First Person Interviews

## Examples of Data Collected

- List of fatalities [FDNY, NYPD, PAPD]
- List of FDNY equipment lost [fire engines, trucks, etc.]
- Dispatch records from FDNY
- FDNY unit operations at the incident
- FDNY and NYPD high-rise operations plans
- Communications systems design and operations
- Recordings of communications [PANYNJ, NYPD, FDNY]
- Supporting documents for the FDNY McKinsey Report

# First Person [face-to-face] Interviews

- New York City

FDNY Interviews - 100

Command Officers, Company Officers, Firefighters, Rescue Squads, Communications, Fire Marshals, etc.

NYPD Interviews - 25

Command Officers, Special Operations Division Officers, Communications Personnel, and Aviation Unit Officers

- Port Authority of New York and New Jersey

PANYNJ Interviews - 15

PAPD Command Officers, Police Officers, Building Safety Staff, Communications Personnel

## **First Person [face-to-face] Interviews**

- Interviews with Port Authority of New York and New Jersey emergency responder personnel have begun.
- Interviews with FDNY and NYPD personnel are being planned and are expected to begin in December.

## **Data Analysis**

- Qualitative analysis of interview data and all other documentary data gathered will use Atlas.ti software

# Electronic Communications Data Analysis

- Most of the radio and telephone communications tapes in NIST's possession have been listened to and analyzed.
- Review and analysis includes communications from:

PANYNJ/PAPD

NYPD

FDNY Channel 30

## Noteworthy Information on Events (1)

### Dispatch/arrival of emergency response units:

By 8:48 am	26 FDNY units dispatched	
8:52 am	5 NYPD ESU units dispatched	
9:00 am	66 FDNY units dispatched	
9:15 am	121 FDNY units dispatched	30 FDNY units call arrival
9:59 am	171 FDNY units dispatched	74 FDNY units call arrival
10:29 am	214 FDNY units dispatched	103 FDNY units call arrival

Note: Arrival times are determined from 10-48 signals transmitted by units as they arrive at their assigned location.



## Noteworthy Information (2)

### Evacuation and emergency response:

- PAPD Desk receives two orders from a PAPD officer calling for evacuation of building by 8:48 am.
- FDNY establishes command post in lobby of WTC 1 by 8:50 am.
- PATH trains were bringing people into the WTC at 8:56 am.
- PAPD called three times for evacuation of WTC 1 and WTC 2 and then “all buildings in the complex” within the 3-1/2 minute period before the second plane struck at 9:03 am.
- Numerous emergency responders ascending in WTC 1 and 2 call in on their radios that they must stop and rest before climbing higher.
- A FDNY Chief Officer makes radio call ordering all units in WTC 1 to come down to the lobby at 9:32 am.
- At and below the 79th floor of WTC 2, firefighters are evacuating occupants, assisting the injured, and fighting fires at 9:57 am.

## Noteworthy Information (3)

### Condition of WTC towers:

- At 9:30 am, a FDNY Chief Officer inside WTC 1 feels the building move and makes the decision that the building is no longer safe.
- At 9:49 am, NYPD helicopters provide a radio report stating that “large pieces” are falling from WTC 2.
- At 10:07 am, NYPD aviation units warn that WTC 1 may collapse.
- At 10:20 am, NYPD aviation unit reports that WTC 1 is leaning to the south.

## Noteworthy Information on Communication Systems (1)

- Radio systems appeared to work well during normal operations before the attack.
  - An open or keyed mike on a handie-talkie transmitted a carrier wave disrupting communications on one PAPD radio channel (W).
  - After the attack the NYPD Central, Special Operations Division (SOD) radio channel experienced similar carrier wave disruptions with communications.

## Noteworthy Information on Communications (2)

- All radio communications evaluated by this study experienced surge load conditions that occurred with the attack.

Traffic Volume - Traffic volume made it more difficult to handle the flow and delivery of information.

Doubling - Multiple radio transmissions on the same frequency at the same time made communications more difficult.

Roughly 1/3 to 1/2 of the communications were not complete due to surge load conditions.

**Questions?**