



# **OGC Web Services – Phase 1 (OWS-1) Demonstration**

Open GIS Consortium, Inc.

**March 7, 2002**

# City of New York Statement

---

I want to pass along my appreciation for the work of OGC and its members to accelerate the development, testing and implementation of new levels of interoperability that are so important to government services in the New York City.

During the response to the recent attacks on the World Trade Center, the rapid integration of spatial data from numerous local, state, federal, NGO and private sector sources was a major priority. Through OGC, we have been able to partner broadly with members of industry, government and academia to address some of the critical interoperability issues that challenged us during that time. I am confident that this relationship will no doubt help the market deliver interoperable capabilities that further improve our ability to deal with future emergencies as well as the critical services we provide to our citizens on a daily basis.

I look forward to opportunities to grow this partnership.

**Alan Leidner**

**City-wide GIS Coordinator**

**Department of Information, Technology and Telecommunications**

**City of New York**



# OWS-1

## Sponsors, Participants, and Coordinating Organizations

### Sponsors

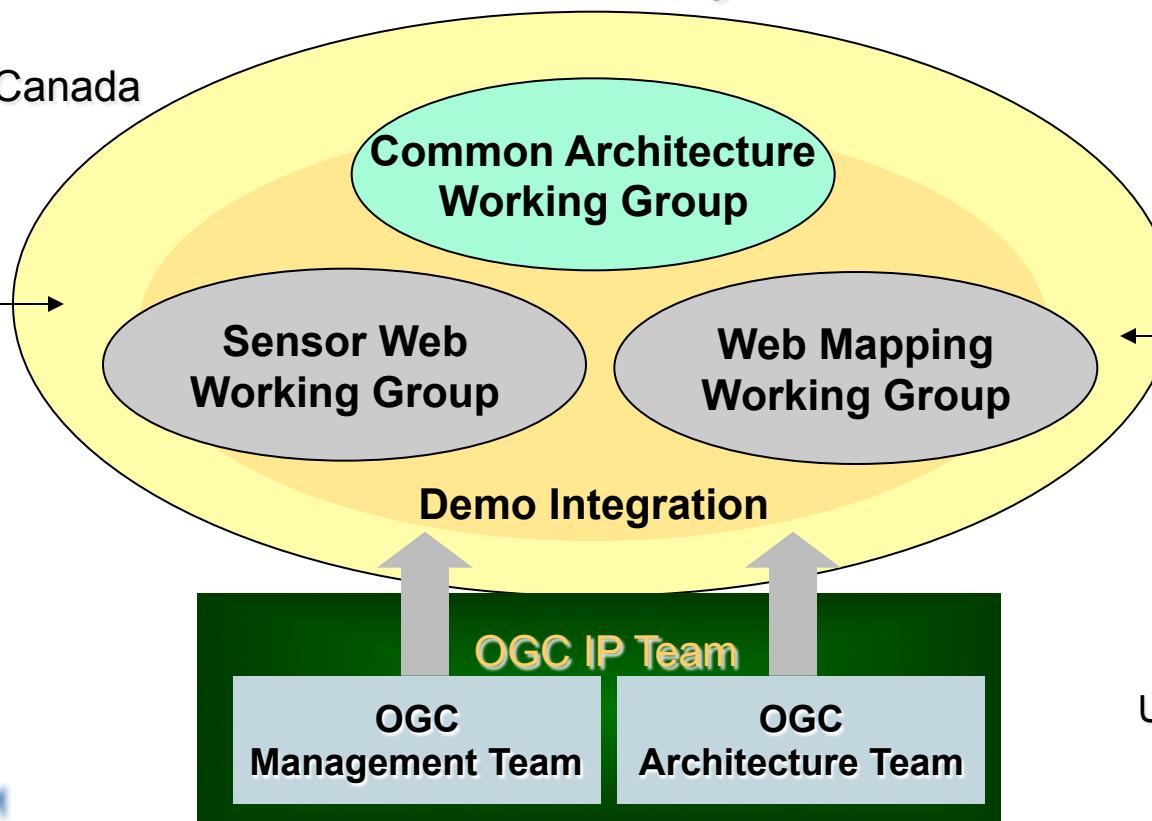
FGDC  
GeoConnections Canada  
Lockheed Martin  
NASA  
NIMA  
USGS  
US EPA  
USACE ERDC  
CANRI

**Coordinating Organizations**  
Urban Logic, CIESIN, NYC DOITT, NYC DEP,  
FEMA, EPA Region 2

### Participants

Compusult  
CubeWerx  
Dawn Corp.  
DLR  
ESRI  
Galdos Systems  
GMU  
Intergraph  
Ionic Software  
Laser-Scan  
PCI Geomatics  
Polexis  
SAIC  
Social Change  
Online  
Syncline  
YSI

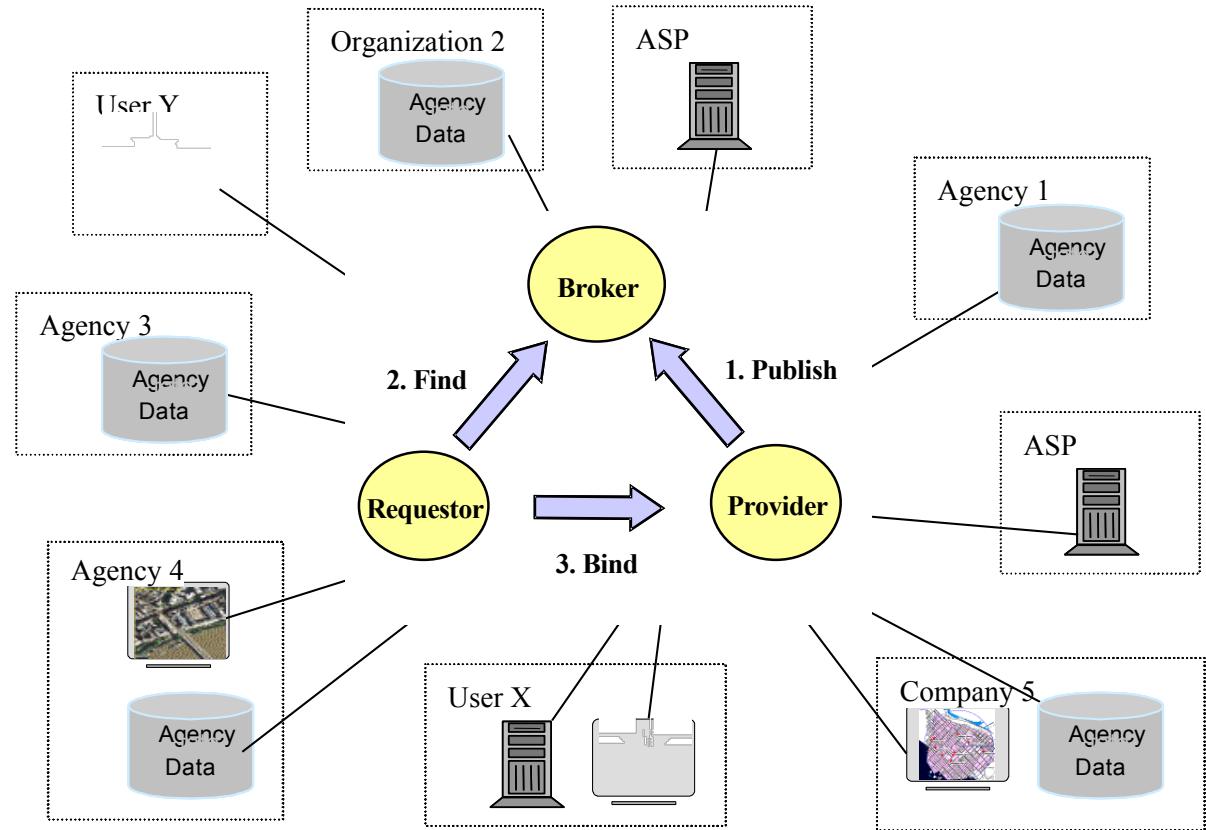
University of Alabama  
Huntsville  
Vision for NY



# OWS-1 Demonstration

# Demonstration of (primarily) commercial software components implementing existing and draft OGC Specifications

Simulated agencies  
and organizations  
share distributed  
information resources  
via OGC Web Services



**After extensive discussion among OGC, Sponsors, and representatives of the City of New York, the *Demo Scenario* for OWS-1 was placed in New York, with a focus upon emergency and recovery responses similar to those that took place during the recent attack....**



# New York City

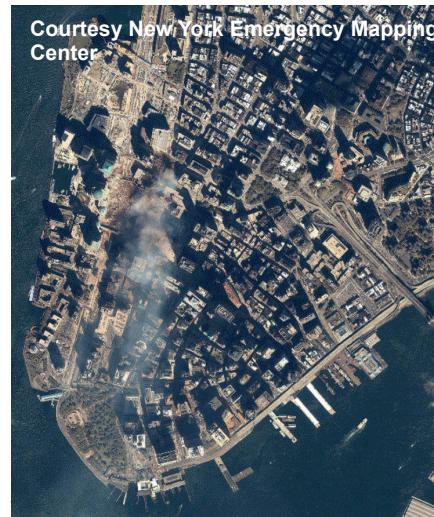


Courtesy New York Emergency Mapping Center



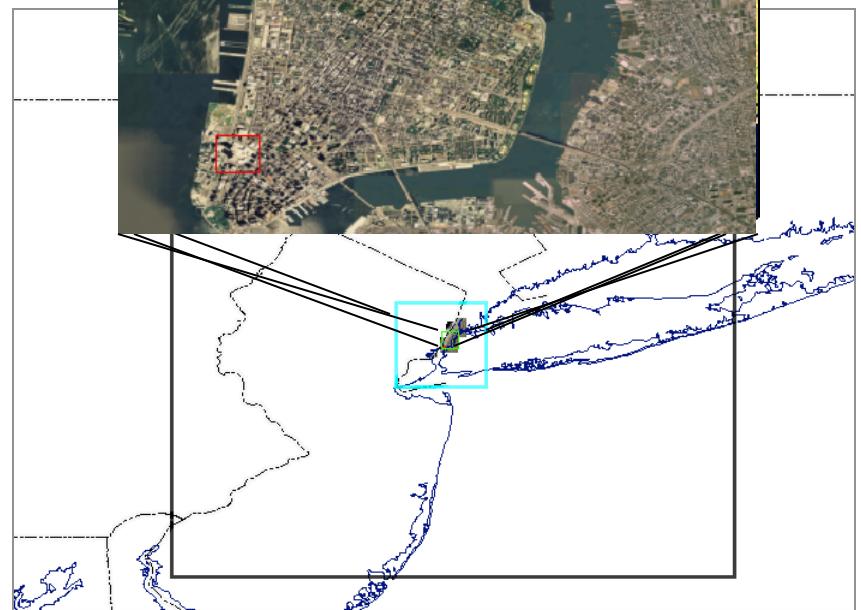
# OWS-1 Demo Scenario - The Event

- At the outset of the scenario, a severe but localized fire erupts in New York City
  - Explosions and structural damage create variety of hazards in the near vicinity, as well as growing cloud of dust with unknown toxic content.
  - Smoke plume from the fire and the dust cloud are picked up by local winds, and start to spread.



# OWS-1 Demonstration Areas of Interest (AOIs)

- AOI 3 – NY State, New Jersey, Long Island
- AOI 2 – Greater New York City Region
- AOI 1 – Lower Manhattan
- AOI 0 - 10 acre area centered around WTC



# OWS-1 Demonstration

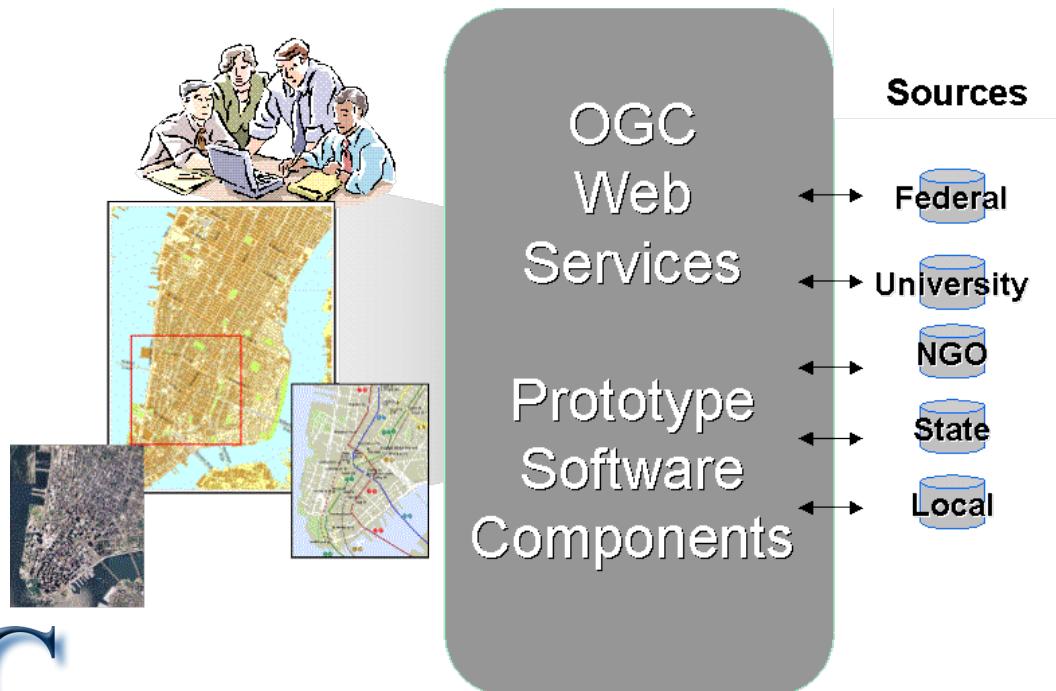
Vignette 1 – Get Quick Maps

Vignette 2 – Service Registration and Discovery

Vignette 3 – Sensor Web Access

Vignette 4 – Imagery Access and Visualization

Vignette 5 – Present Information for Decision



# OWS 1.1 Demonstration

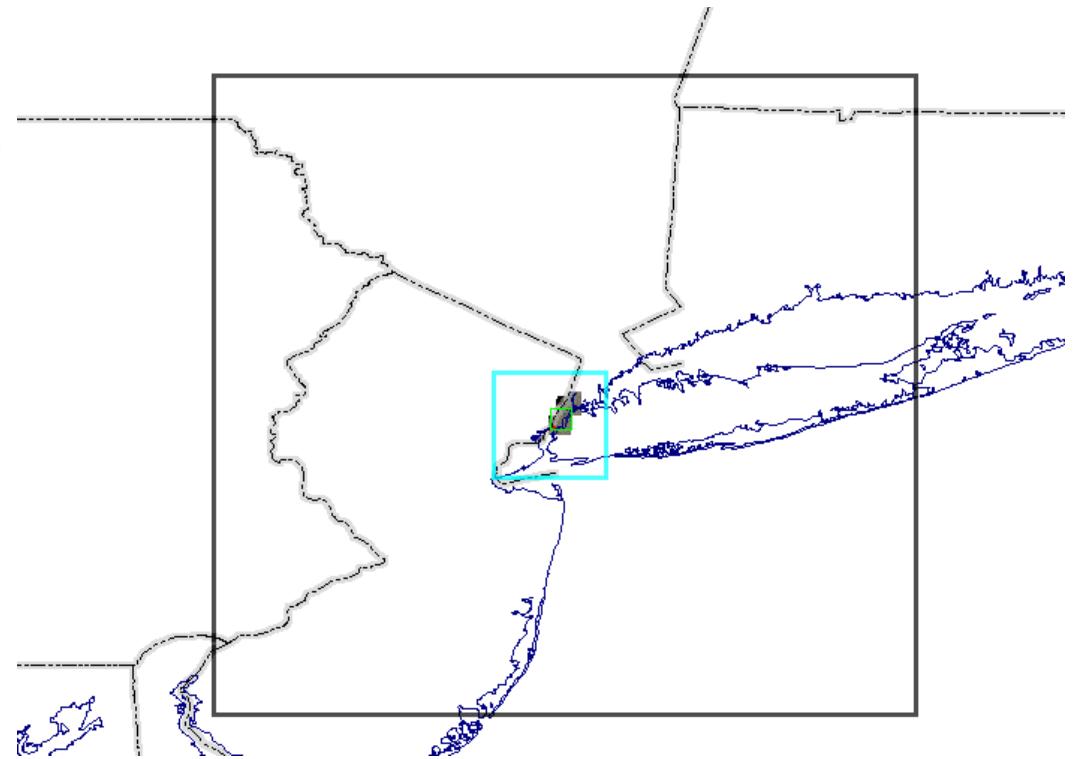
---

- This *Demo is live and worldwide on the Internet!*
- The clients are in this room but the servers are in –
  - Ottawa, Canada (Hull, Quebec) – 3 servers
  - Newfoundland and Labrador
  - Sioux Falls, SD
  - Huntsville, AL
  - Boston, MA
  - Washington, DC (multiple servers)
  - Greenbelt, MD
  - Fort Belvoir, VA
  - Liege, Belgium
  - Cambridge, UK
  - San Diego, CA
  - Pasadena, CA
  - Redlands, CA
  - Sydney, New South Wales Australia
  - St Louis, MO
  - New York City, NY
  - Palisades, NY

# Vignette 1- Get Quick maps

- The purpose is to rapidly develop an overall view of the Disaster Area to support recovery areas.

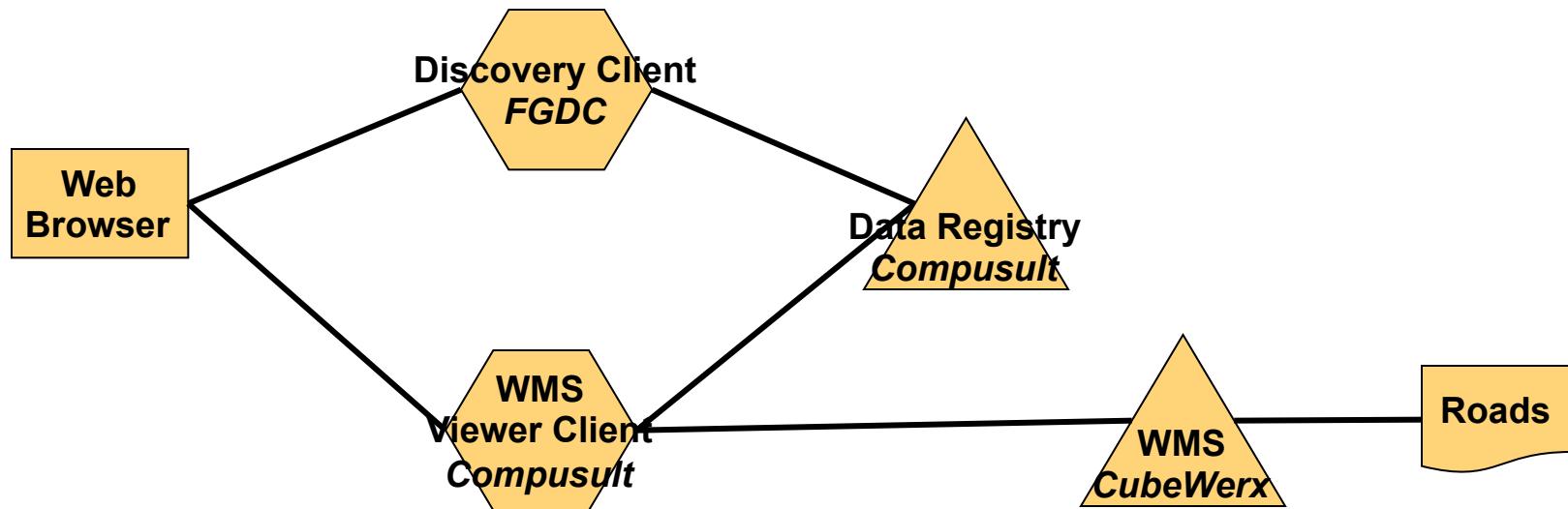
- There are four different Areas of Interest.
  - AOI 3 – Small scale – weather patterns
  - AOI 2 – larger scale – transportation routes
  - AOI 1 – larger scale
  - AOI 0 – largest scale – Disaster site



# Vignette 2: Data Discovery

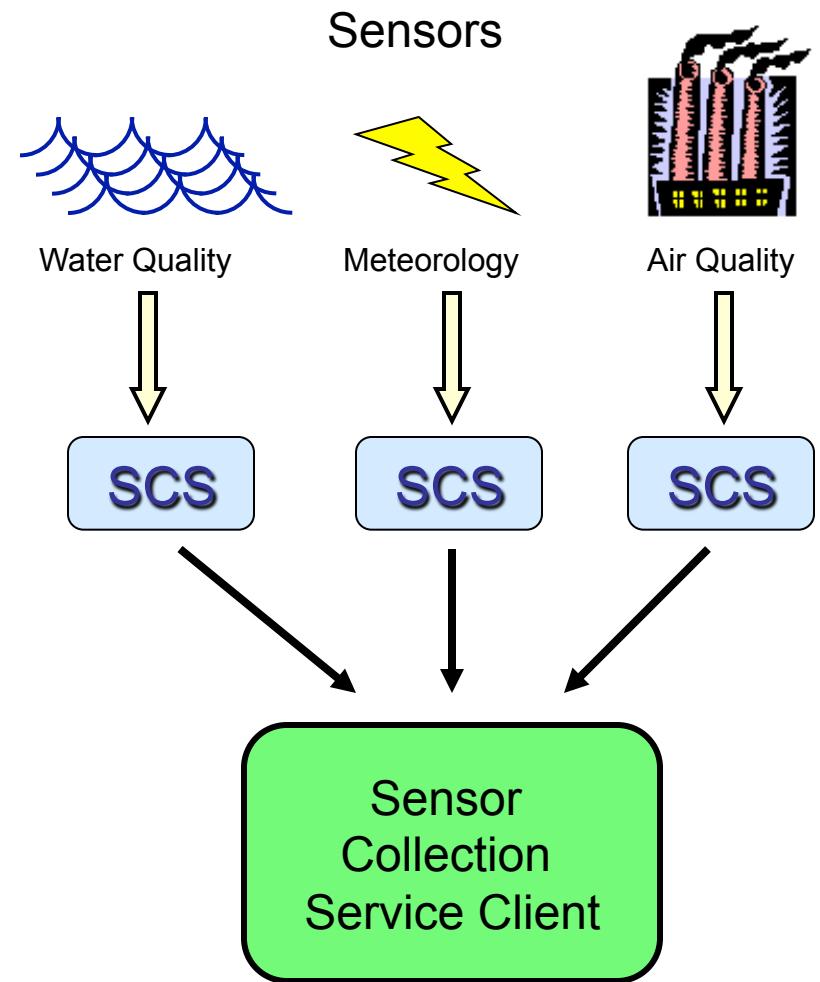
## Discover data and related services

1. Geographic Specialist searches data registry for building location data
2. Metadata lists services that portray building data



# Vignette 3: Sensor Web Access

- Comprehensive knowledge of the state of the environment requires integrated analysis of a variety of information sources.
- Challenge: to provide a means for combining timely and accurate measurement data from multiple networks of in-situ sensors.
- OWS Sensor Web demonstrates integration of heterogeneous meteorological, water quality, air quality, and seismic sensor networks with other OGC web mapping technologies.



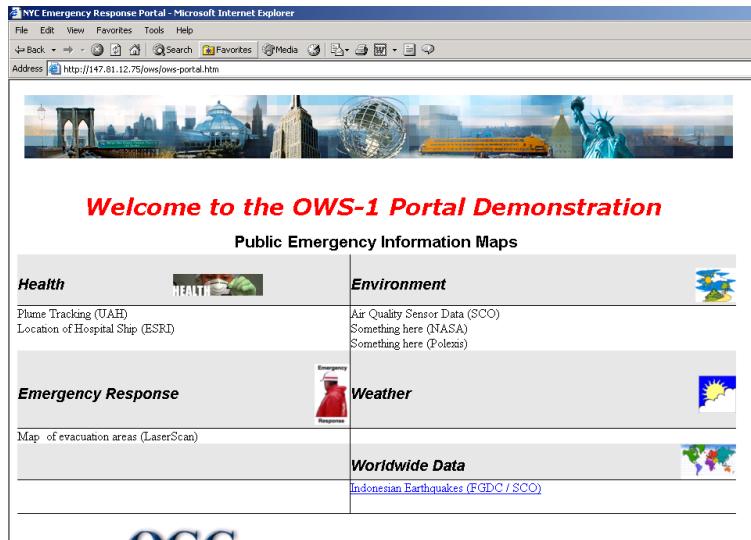
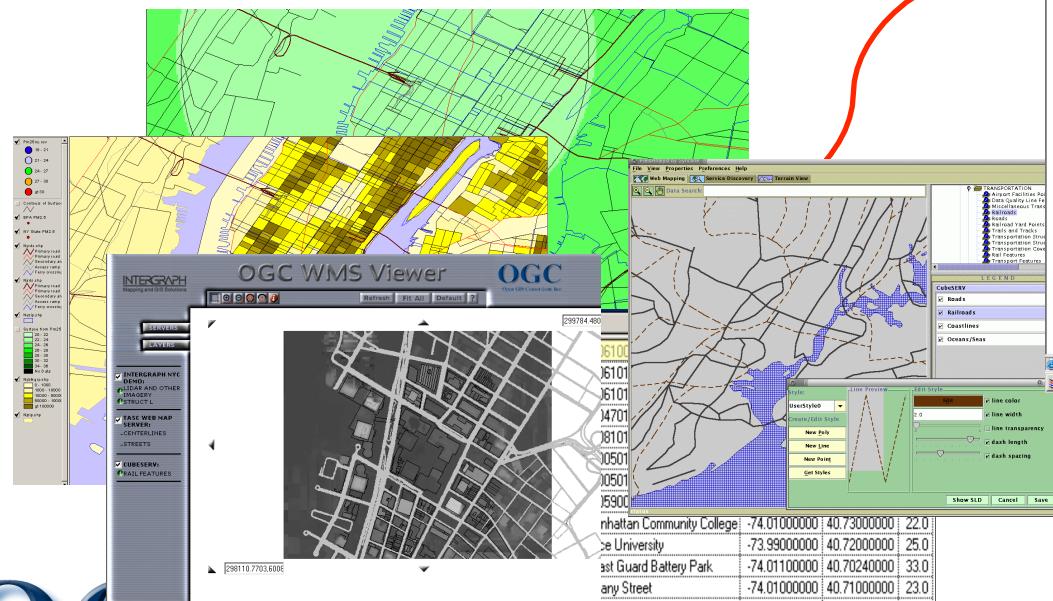
# Vignette 4 - Imagery Access & Visualization

- A variety of sensors contribute to understanding of the situation
  - LIDAR
  - AVIRIS
  - MODIS
  - SPOT, Etc.
- Discovery
  - Clients review Capabilities Documents to Discover Critical Information
- Access
  - Clients issue queries to WCS
- Visualization
  - Flexible Portrayal of Imagery (CPS) & Visual Integration of Imagery and Mapping Information



# Vignette 5: Supporting Decision Flow

- Geospatial specialists prepare maps for decision makers & general public
  - Add context to specialized information
  - Utilize information to make decision
  - Update styling for decision maker point of view
- Make maps available on a portal accessed from Situation Room



OGC  
Open GIS Consortium, Inc.

Created by: social change

# Special Thanks to:

---

Northrop Grumman Information Technology TASC

OWS-1 Participants

OWS-1 Sponsors

City of New York

OGC IPTeam