



# The CHICAGO STORY

**Use of CCCTV for General Area Surveillance,  
Crime Hot Spots, Mobile Applications, and  
Future Developments**



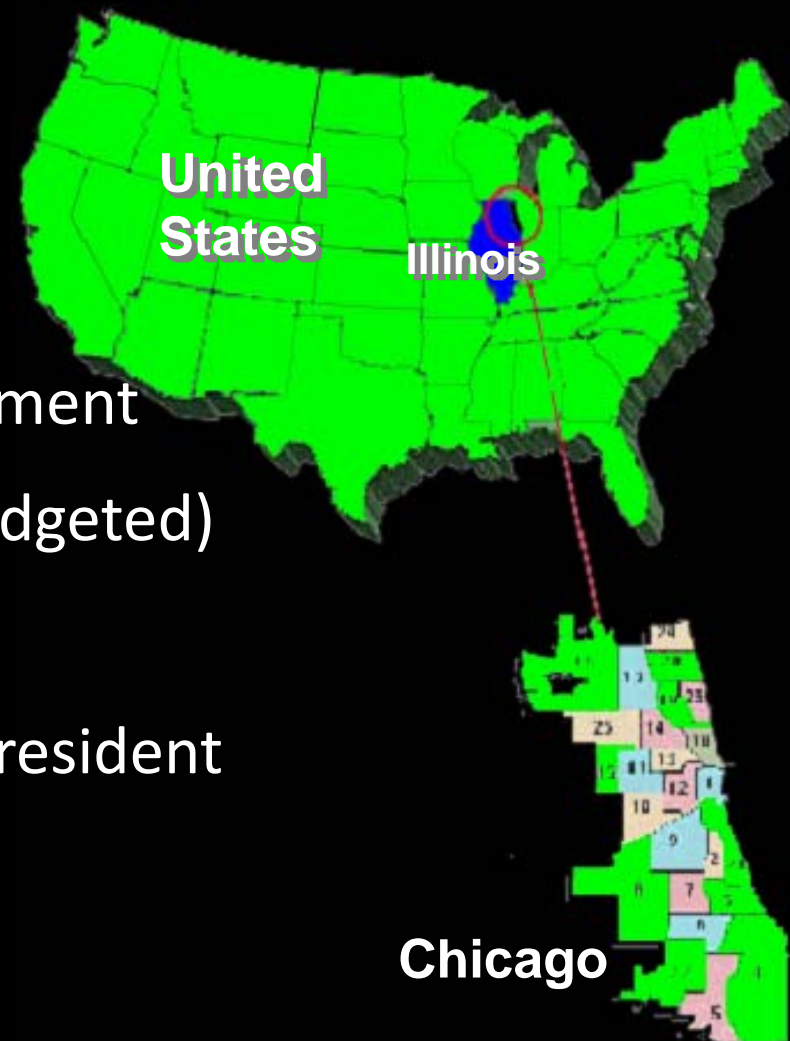


## 3rd Largest U.S. City

- 2.9 million residents
- 228 square miles

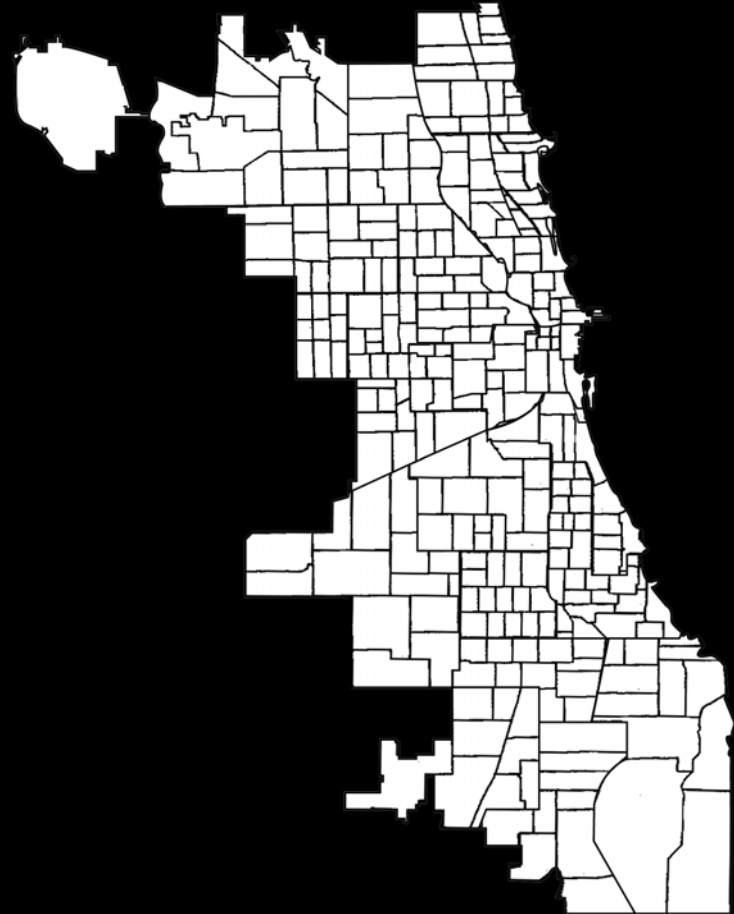
## CPD 2<sup>nd</sup> largest U.S. Police Department

- 13,600 sworn members (budgeted)
- 3,500 civilians
- 4.8 officers for every 1,000 resident





- 5 Police Areas
  - 25 Police Districts
    - 280 Police Beats
    - The size of a Police Beat is Determined by Population & Criminal Activity





## NEWS

### UPDATED: Daley Defends City's Camera Network

February 8, 2011 12:01 AM

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A Chicago Police blue light camera. (Credit: CPD)



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Communications



# General Area Surveillance Operation Virtual Shield







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## OVS System Scope

- One of the most sophisticated physical security systems
- Core security devices located in the Central Business District
- Additional cameras from sister agencies
- Capability to tie in Private Sector cameras via a Virtual Private Network system

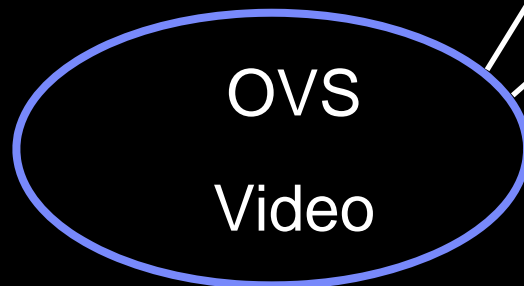
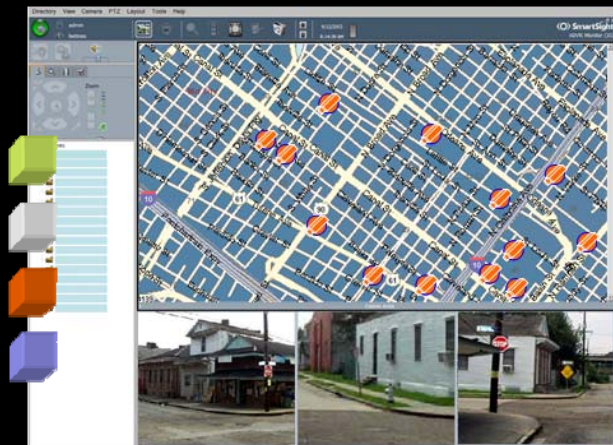






OEMC adopted *Citywide* Video Federation technology that brings video from numerous agencies and properties under a unified OVS video system.

Unified Viewing according to policy







Genetec Omnicast Live Viewer

System View Camera Layouts Tools Help

tcaputo @ 1016411 CPU Video 7/16/2008 1:08:53 PM

Monitor 191 Tile 3 Camera 119

OMNICAST

Tool Pane

Camera controls Instant replay

Ready

Preset: 01 - Home

Pattern: 1 - Pattern1

- Chicago River and Clark (M83) - Enc (83)
- Chicago River and Dearborn (M86) - Cam
- Chicago River and McClurg (M170) - Car
- Chicago River and Michigan (F172) - Enc
- Chicago River and Orleans (M84) (84)
- Columbus and Chicago River (M171) - Enc
- Congress and Clark (F254) - Enc (254)
- Congress and Columbus (M204) - Enc (2
- Congress and LakeShoreDrive - Cam - 01
- Congress and Michigan (F203) - Enc (20
- Congress and State (F202) - Enc (202)
- Congress and Wells (F255) - Enc (255)
- Default-101 (444)
- Default-924 (789)
- Delaware and Dewitt (M129) - Enc (155)
- Delaware and Lake Shore Drive (P131) - Enc (136)**
- Delaware and Michigan (F130) - Enc (13)
- Delaware and Seneca - Cam - 01 (542)
- Delaware and Wabash (F128) - Enc (128)
- Division and Halsted (M1) - Enc (36)
- Division and Larrabee (P306) - Enc (306)
- Division and Michigan (F119) - Enc (119)**
- Division and Wells (F5) - Enc (5)
- Elm and LaSalle (F3) - Enc (3)
- Elm and State (F4) - Enc (4)
- Erie & Michigan (M148) - (M148) - Enc (
- Erie and Dearborn (F53) - Enc (53)
- Erie and Lakeshore (F156) - Enc (269)

Chestnut and Lake Shore Drive (P269) - Cam - 01 (802)

Delaware and Lake Shore Drive (P131) - Enc (136)

Division and Michigan (F119) - Enc (119)

Chestnut and Lake Shore Drive (P269) - Cam - 01 (802)

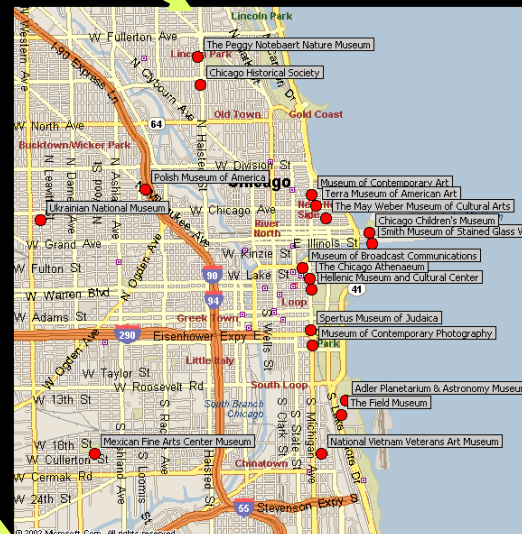
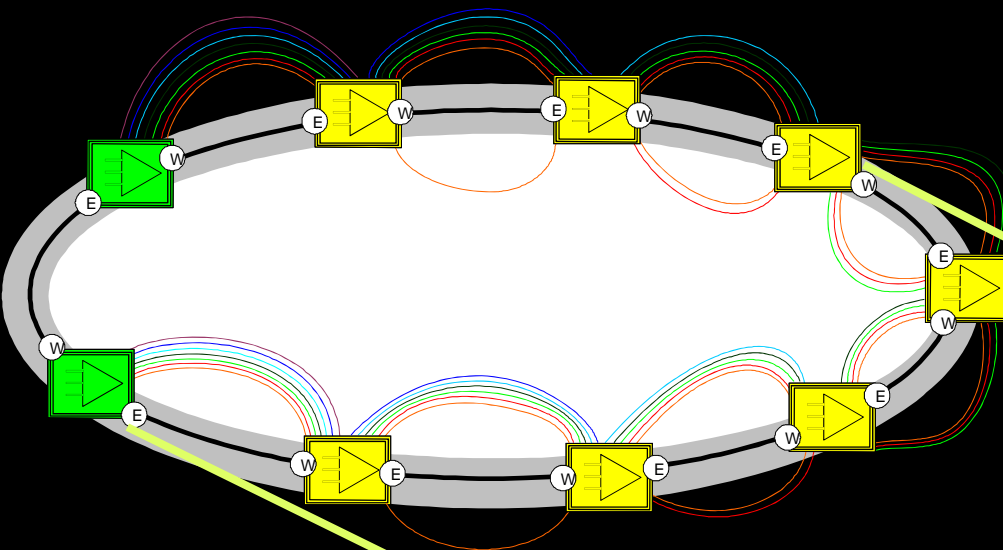
Default-191

191



# A fiber optic surveillance network to interconnect cameras, organizations, and city services is vital to the infrastructure

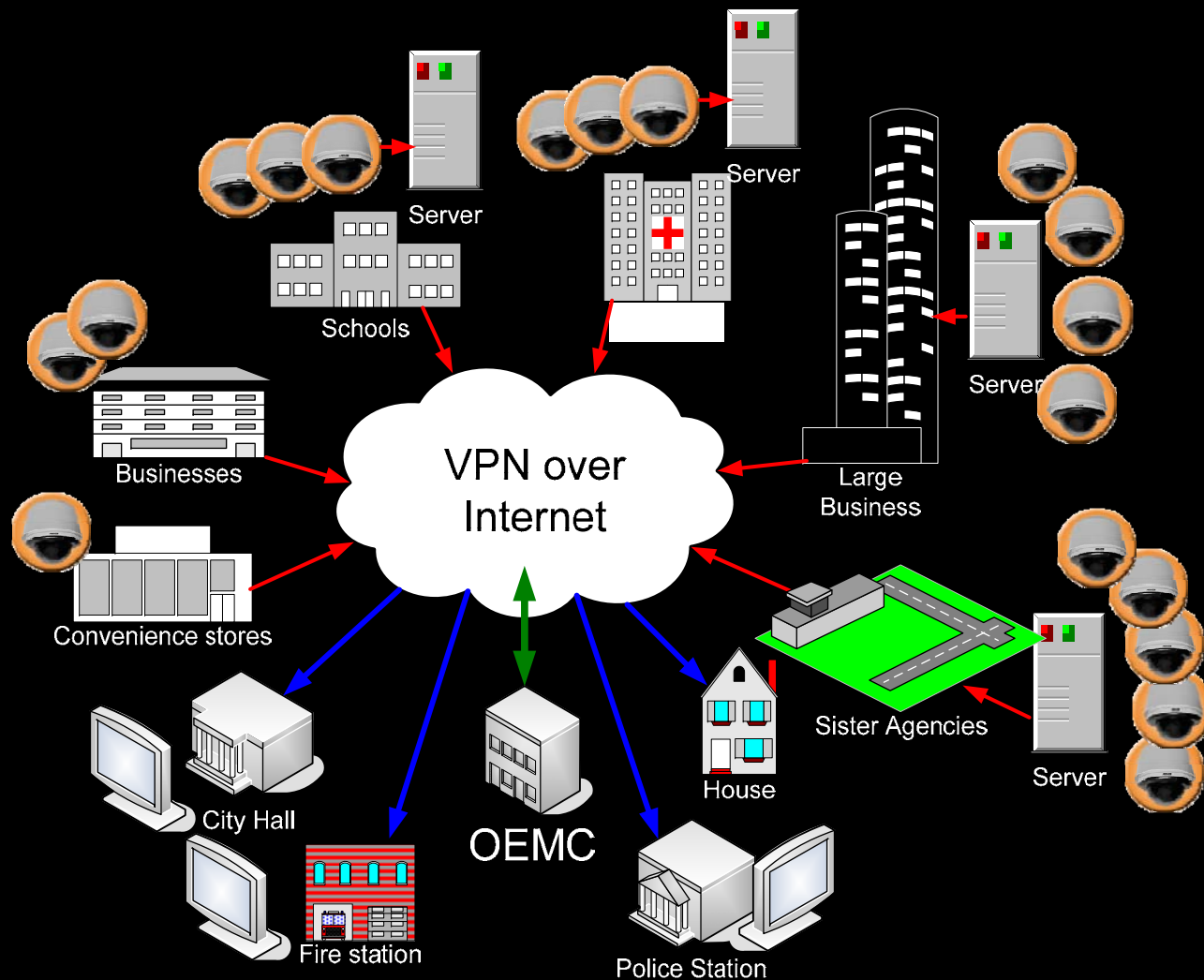
# Homeland security, police, fire and traffic management incidents seamlessly linked together



For security reasons, no actual locations are shown



## Non-OVS Network Cameras integration strategy



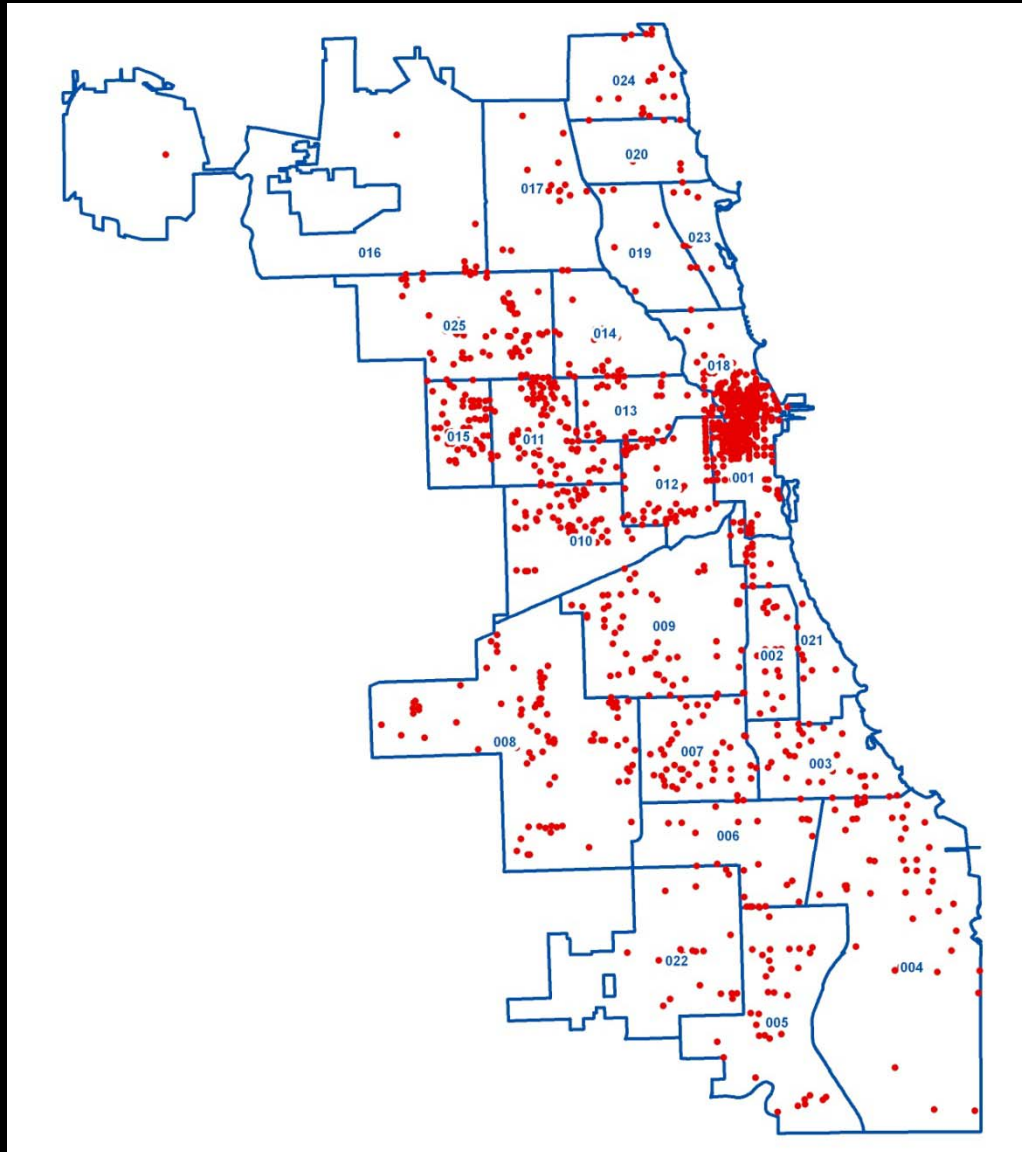


Cameras and Crime Hot Spots

# The Role of POD Cameras









## Three Generations of PODs

- Flashing blue light
- Large CPD star and checkerboard markings
- Shell of reflective material
- Bullet proof casing
- Camera zooms and rotates 360 degrees
- Pan-Tilt-Zoom Camera





- **POD program introduced June 2003**
- **Program utilizes a variety of funding sources**
  - City of Chicago corporate funding
  - Aldermanic funding
  - 1505 Narcotics Seizure funds
  - US Department of Justice grant funds
  - Illinois Board of Higher Education funds
  - Chicago Housing Authority funds
- **Cameras are placed at locations that fit the narcotic related criteria:**
  - High number of narcotics related calls for service
  - Public violence incidents
  - Community input





- **Real-time camera video can be viewed from**
  - Police districts
  - Police Crime Prevention and Information Center
  - Office of Emergency Management
- **Police camera network is “federated” to Operation Virtual Shield network**
- **Over 4,000 Chicago Public High School cameras can be viewed from police facilities**







- **Camera missions are conducted by police districts and Office of Emergency Management personnel**
- **Cameras near calls for service can be viewed by dispatchers**
- **Over 15,000 POD missions have been conducted in 2010 alone**
- **Over 3,500 “POD-related” arrests since February, 2006**
  - POD-related is an arrest where the arresting officer indicates that a camera played some role in the arrest





## How Are They Used?

- **POD Missions**
- **Video Evidence**
  - Suspect Identification
  - Vehicle Identification
  - Witness Identification
- **Vehicle-based Surveillance**
- **Major Events**
  - Taste of Chicago
  - Air and Water Show





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# Unlawful Use of Weapon

1230 N. Larrabee

***Four Offenders arrested and charged.***









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# Felony UUW Charges



HUDSON ,DAVID  
6153 S FRANCISCO AVE  
IR:1403928



COOPER ,LAVONSHAY  
1230 N LARRABEE ST  
IR:1676411



BALL ,ARTHUR  
660 W DIVISION ST  
IR:1280424



DELANEY ,TERRANCE  
7014 N RIDGE BLVD  
IR:1183507





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# Mobile Applications





## Mobile Video Resources



Helicopter and Trucks can  
transmit video back to police  
HQ, 911 center

Satellite, Microwave, and  
Cellular Wireless

Used at major  
demonstrations, other  
events





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# Future Developments







## Future Enhancements

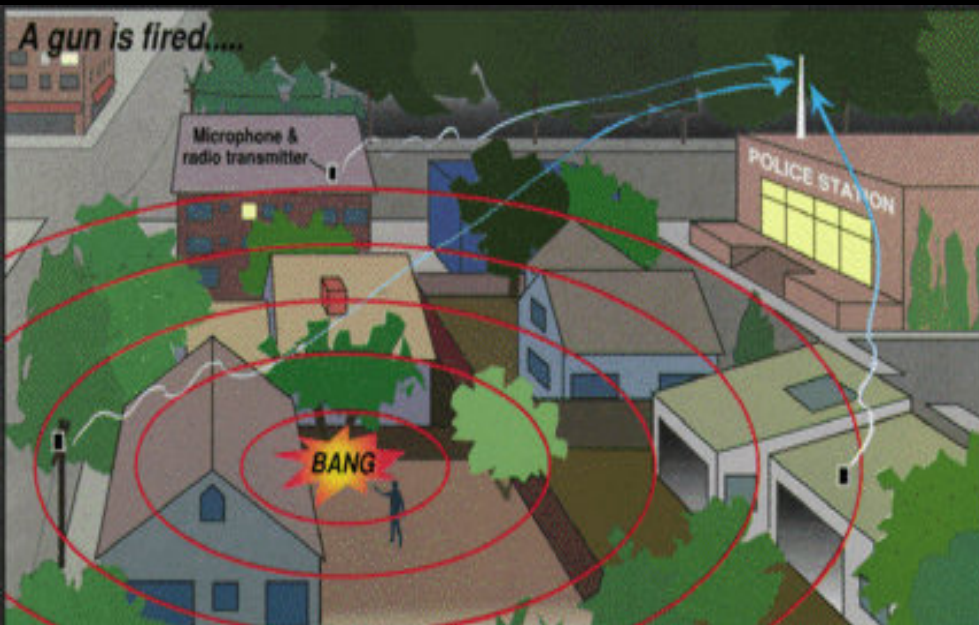
- **Sensor systems**
  - Gunshot detection
  - Radiation sensors
- **Analytics**
  - Patterns of behavior: People fighting, object left behind, license plate recognition
- **Delivery of real-time video to Portable Data Terminals**
- **Delivery of real-time video to BlackBerries**





# Gunshot Detection

- Three systems tested (PSI, Safety Dynamics, ShotSpotter)
- Approx 1 Sq Mi each
- Approx cost is \$200k/ sq mi
- System anticipated to be installed this year in one area of city



Tue Feb 27 13:26:36.156 2007

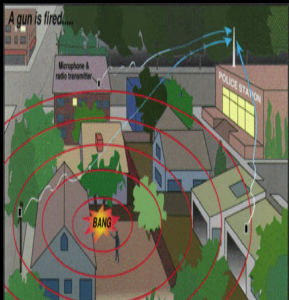




## Centralized Analytics Engine



Real-Time Processing at Police HQ







## BlackBerry Pilot



200 devices deployed to Central Business Dist

- Dispatch (receive 911 jobs)
- Disposition (clear from jobs)
- Name checks (local, state, federal)
- Vehicle checks (local, state, federal)
- Mapping (crimes, calls for service)
- Email
- Telephone (for notifications)
- GPS (supervisors can track officers)
- Real-time POD video
  - View, Pan-Tilt-Zoom control







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