



INNOVATION
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Fighting Crime with 1's and 0's

Walter Romanowski

CTO, NYPD

NOV 16, 2008

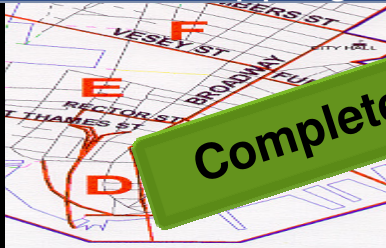


NYPD Strategic Technology Plan – VISION I



Accomplishments: NYPD Technology Projects

Automated Crime Mapping



Completed

z990 Mainframes Upgrade



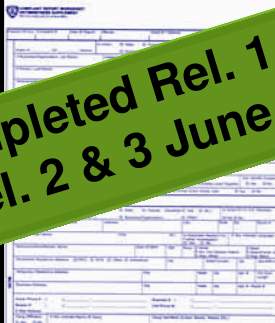
Completed

Digital Voice Recording



Completed

Omniform



Completed Rel. 1
(Rel. 2 & 3 June 06')



NITRO System



Completed

Warrant Photo Manager



Completed

Intranet



Completed Rel.2

Internet

Livescan

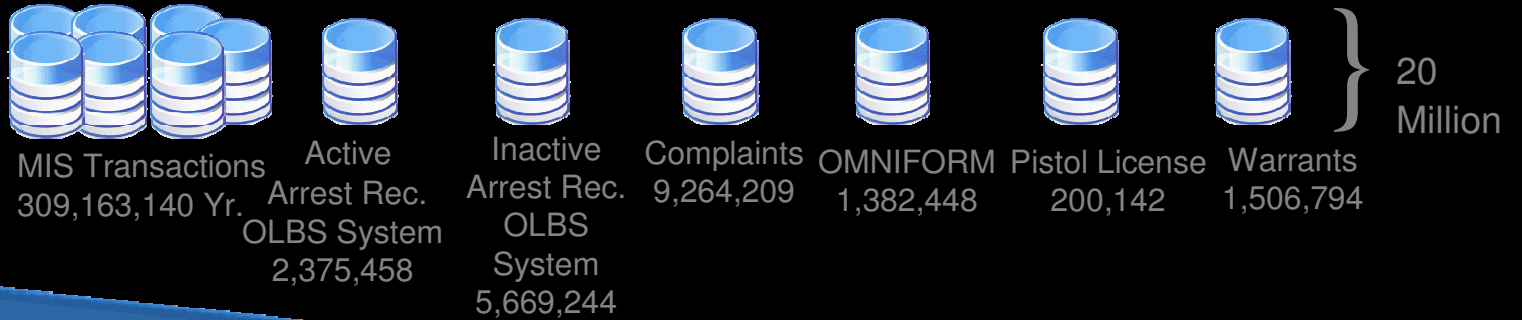


Completed



YPD Law Enforcement Process

Databases



Police Officers
35,480



Civilians
15,156

* Sch Cross Grd - 2243

Radios
40,000



Patrol
4,000

Fingerprints
333,000 Yr

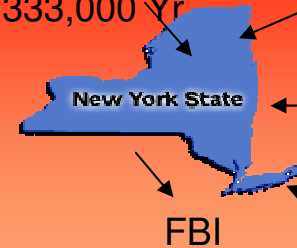


Photo Mugshots
310,000 Yr.

DMV Checks
19,688,100 Yr.

Warrants/
Name Checks
3,700,000 Yr.

IBM

LMSI



Precinct Hot

Spots

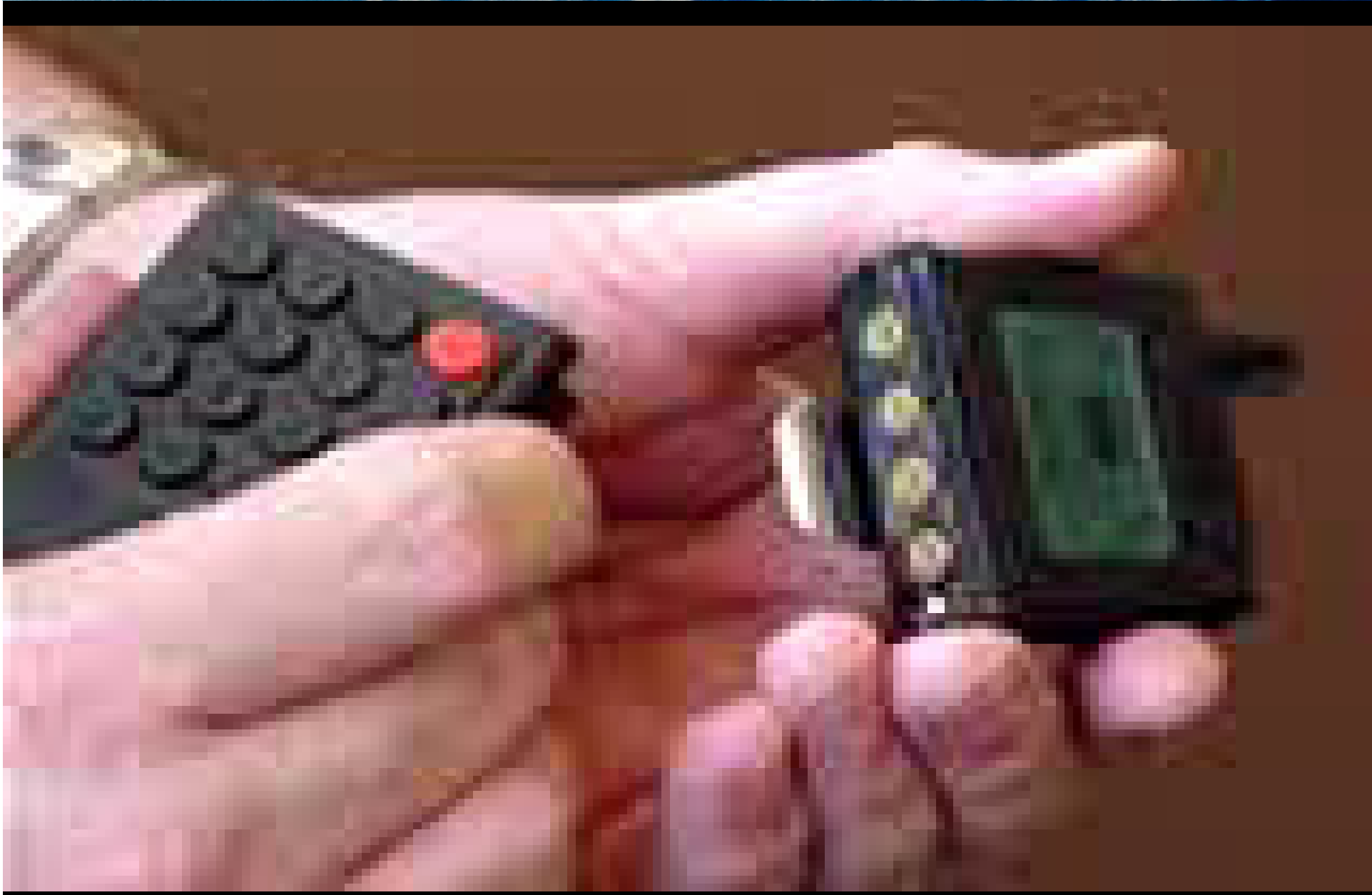
The Shield

INNOVATION



RTCC





Lower Manhattan Security Initiative



A UNIQUE SECURITY CHALLENGE...



> \$1 trillion in financial transactions executed in this area daily



Site of previous terrorist attacks



11 Fortune 500 companies are located in this area - many high gross revenue / high employee count firms located within the LMSI area



Fulfills all of al-Qaeda's targeting requirements



LMSI COORDINATION CENTER



January 22, 2008
Completion of design phase



September 2008
Space becomes operational

LMSI Coverage Area

(1.7 sq miles)



PRECINCT HOT SPOTS

A white police car with blue stripes and 'NYPD' on the side is shown against a black background. Four orange diagonal banners are overlaid on the car, each containing a text block.

Extends the Precinct
Network to Vehicle

Update Existing Laptop
Software

Apply Operating System
Updates & Patches

Download New Applications
as Needed

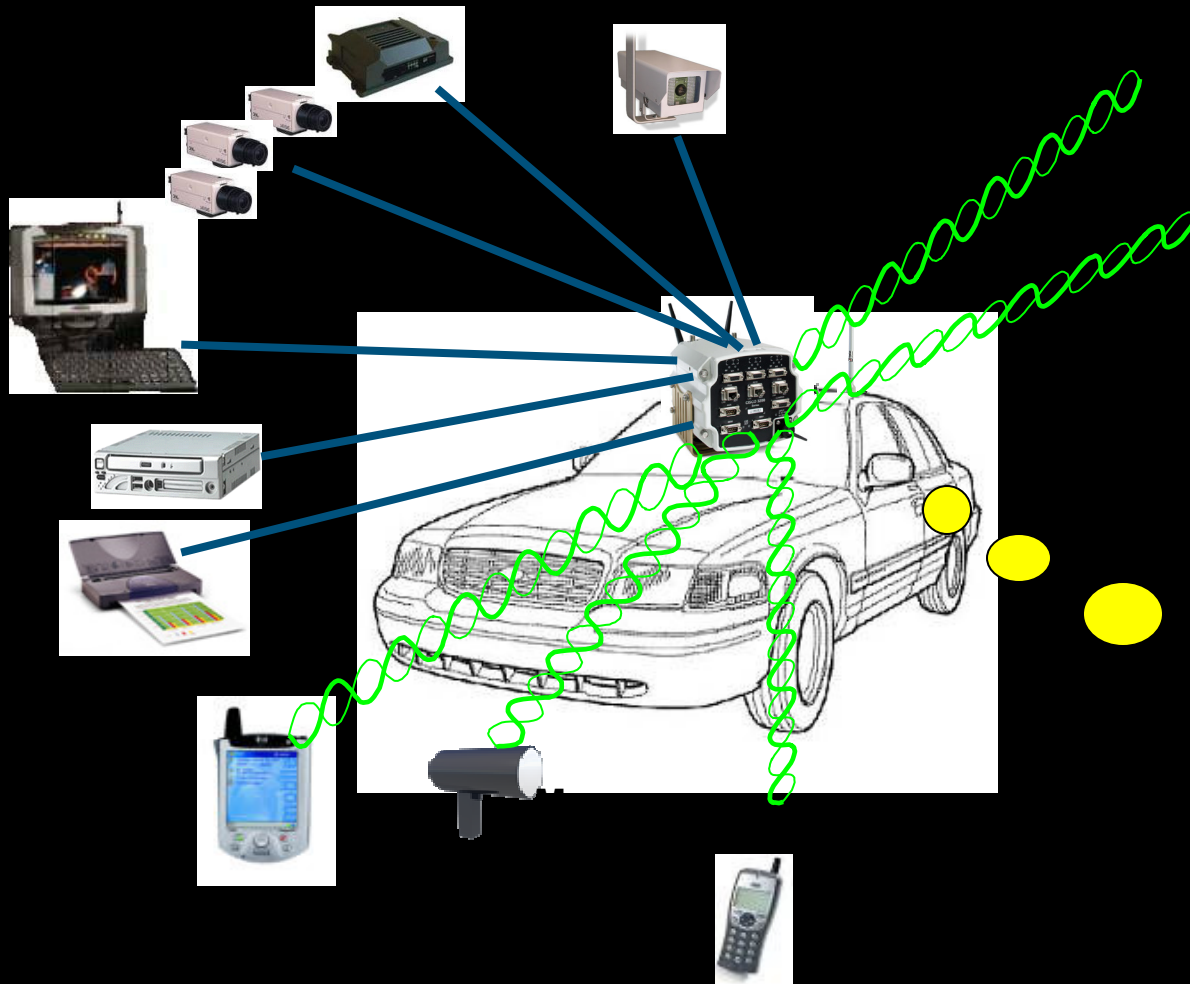


**NYPD
Network**

*Software
Updates, Patches*

Mug Shots

Public Safety Vehicle Applications





NYPD REAL TIME CRIME CENTER

ROBBERY (IN PROGRESS) -
ASSAULT (IN PROGRESS) -
LARCENY (IN PROGRESS) -



Raymond W. Kelly
Police Commissioner

September 13, 2006

V. James Onalfo-CIO
Deputy Commissioner

The Center

- 25 modular analyst work stations
- Multiple data sources and live video feeds
- 12 L.C.D. monitors displaying traffic, counter terrorism and landmark cameras, compstat, etc
- Conference facility incorporating: computer, video and audio conferencing
- Extension of EOC in case of large scale emergencies

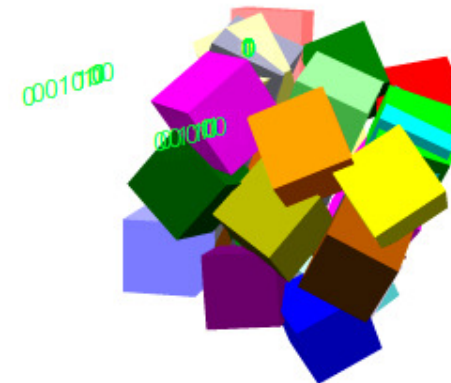
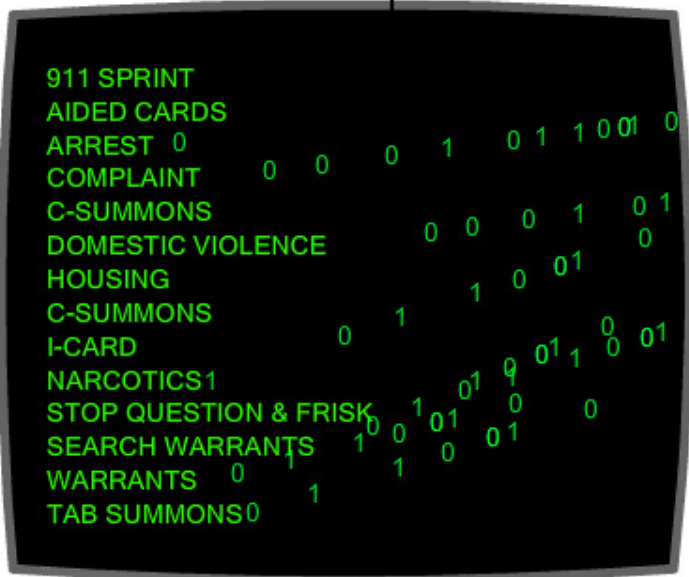


Data Warehouse

Disparate Data Sources

Police Department

City/State/Federal



DATA WAREHOUSE



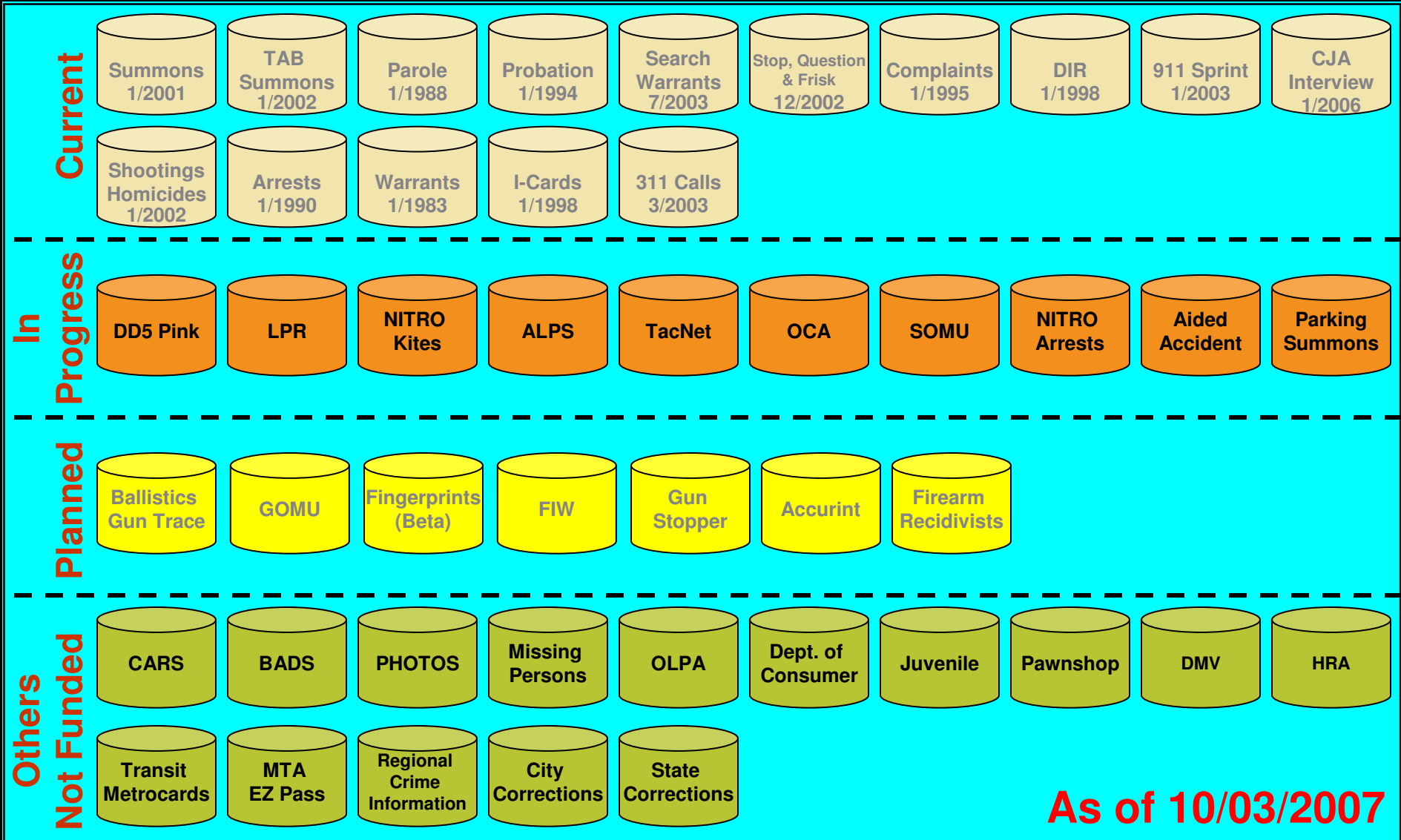
Camtasia Studio Tip
 Press F9 to pause/resume recording.
 Press F10 to stop recording.

**ENRICHED
ENHANCED
RESTRUCTURED**



Data Warehouse





As of 10/03/2007



NYPD SHIELD

COUNTERING
TERRORISM
THROUGH
INFORMATION
SHARING

A Public/Private Sector Security Partnership

NYPD's LATEST COUNTER TERRORISM PROGRAM

OVER 4,000 MEMBERS RECEIVE
ALERTS AND INFORMATION AND
UNDERSTAND IMPLICATIONS TO
SELF





PRIVATE SECTOR

"COUNTING NYPID"
SHIELD
TERRORISM THROUGH IT'S A INFORMATION two-way street SHARING

NYPD



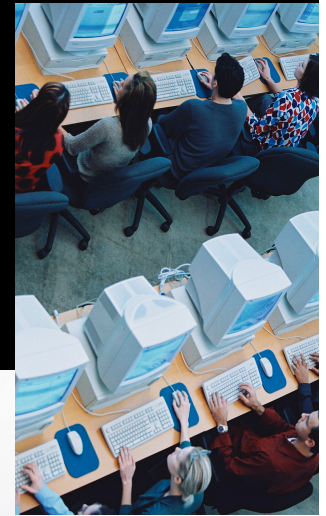
What We Do



In-person intelligence and threat briefings conducted by CTB and Intel Division



NYPD Website Postings



Training services to assist public and private entities in defending against terrorism

Shield Alert e-mail message



What We Ask

**Personnel share
knowledge of buildings,
blocks and
neighborhoods they
know best**

**Report suspicious
behavior**



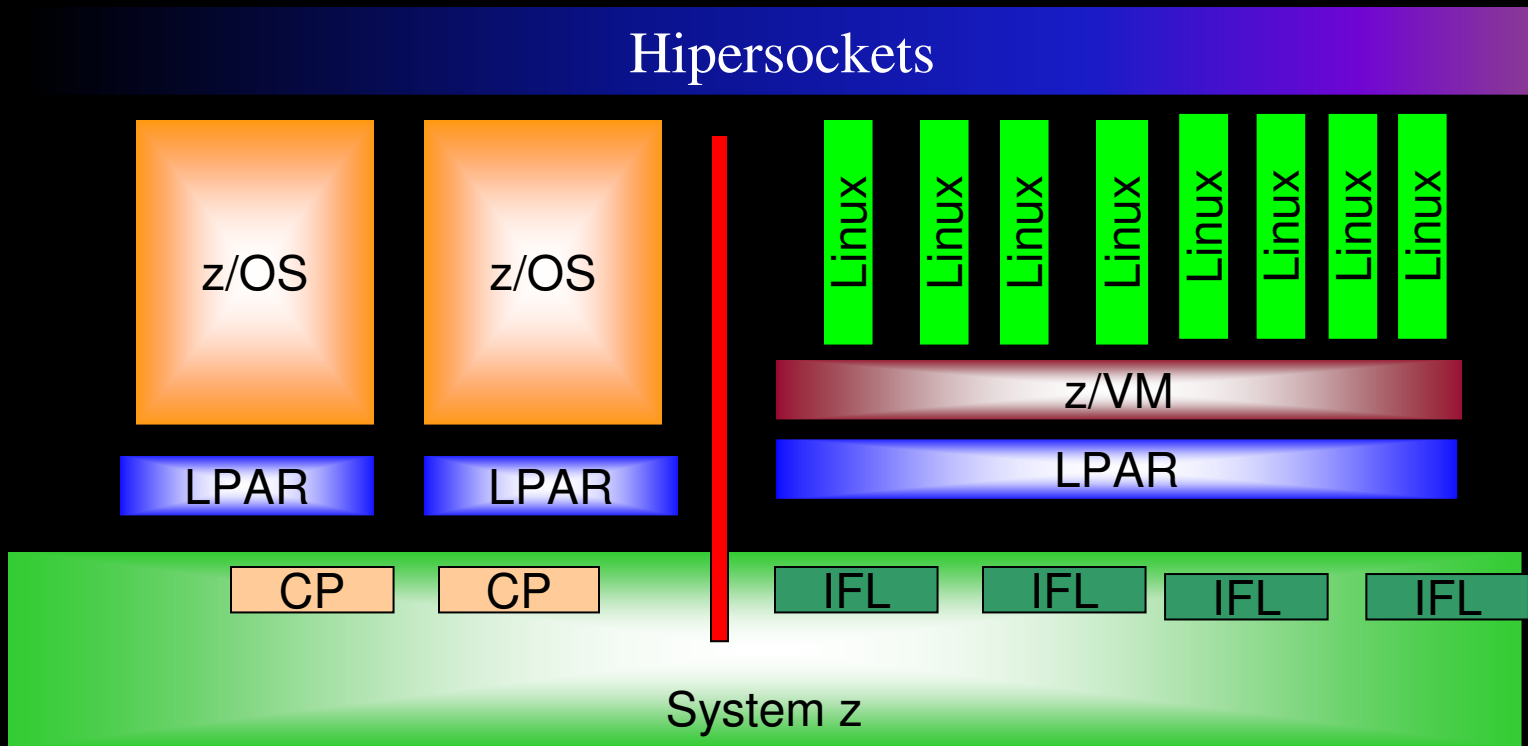
Business Challenge

Taking back control of NYPD IT infrastructure
A data center in a box – not a server farm

- Central point of management
- Increased resource utilization
- Lower cost of operations
 - Less servers
 - Fewer software licenses
 - Fewer resources to manage
 - Less energy, cooling and space
- Fewer intrusion points
 - Tighter security
- Fewer points of failure
 - Greater availability



NYPD - High Level Overview



Linux on IBM System z

Linux + Virtualization + System z = SYNERGY

- The legendary IBM mainframe – IBM System z
 - Legendary dependability
 - Extremely security-rich, highly scalable
 - Designed for multiple diverse workloads executing concurrently
 - Proven high volume data acquisition and management
- The IBM mainframe virtualization capabilities – z/VM
 - Improved scalability for applications with large memory requirements
 - Increased number of virtual guests possible with dedicated devices
 - ... and improved performance and enhanced SCSI disk support
- Open standards operating system – Linux for System z
 - Reliable, stable, security-rich
 - Available from multiple distributors
 - Plentiful availability of skills administrators and developers
 - Large selection of applications middleware and tooling from IBM, ISVs and Open Source

Business Case for Linux on System z

1. Increased solutions through Linux application portfolio
2. Large number of highly skilled programmers familiar with Linux
3. Integrated business solutions
 - Data richness from System z
 - Wide range of Linux applications
4. Industrial strength environment
 - Flexibility and openness of Linux
 - Qualities of service of System z
5. Unique ability to easily consolidate large number of servers

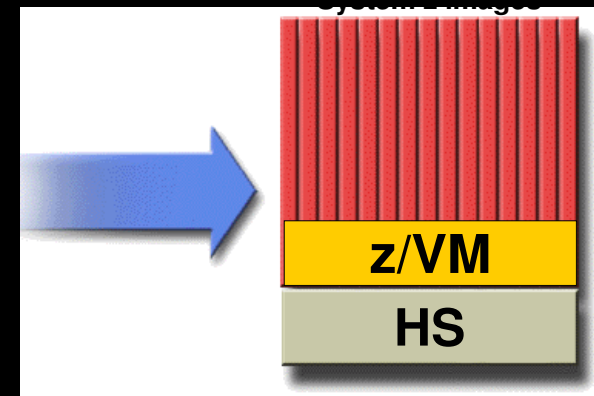
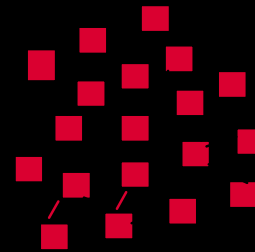


Value of Linux on System z

- Reduced Total Cost of Ownership (TCO)
 - Environmental savings – single footprint vs. hundreds of servers
 - Consolidation savings – less storage, less servers, less software licenses, less server management/support
- Improved service level
 - Systems management (single point of control)
 - Reliability, availability, security of System z
- Speed to market
 - Capacity-on-demand capability on System z
 - Dynamic allocation of on-line users, less than 10 seconds to add a new Linux server image using z/VM and IBM DS8000

The value of z/VM for Linux

- Enhanced performance, growth and scalability
 - Server consolidation enables horizontal growth
 - N-tier architecture on two tiers of hardware
 - Extensive support for sharing resources
 - Virtual networking
 - Effective isolation of Linux images, if required
- Increased productivity
 - Development and testing
 - Production support
- Improved operations
 - Backup and recovery
 - Command and control



Value System z Brings to NYPD's OmniForm WebFOCUS Arrest Processing System

- Best Scalability
 - Insures that computer resources do not limit business growth
 - Insures that computing costs remain proportionate to business growth
- Best Performance
 - Supports maximum productivity of end users
- Best Availability
 - Prevents customer/revenue loss due to downtime
- Best Flexibility
 - Decreased support costs / staff required for: installation, customization, maintenance, and monitoring
 - Faster time to market via On Demand rollout of new servers
- Lowers TCO
 - Via server consolidation

“After careful evaluation, we decided to implement the NYPD Arrest Processing System based on IBI’s WebFocus on Linux on System z under z/VM due to its superior virtualization and high availability characteristics that enabled us to provide our police force with a system that is available 24x7”

Walter Romanowski, NYPD Director of Operations and Communications

QUESTIONS???

