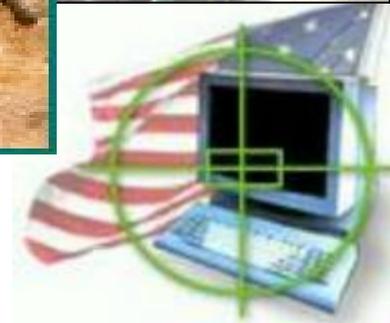


Homeland Defense

**U.S. Army
Communications
Electronics Command
Pat Butler
4 June 2002**



The Intent of the Office of Homeland Security

“

“To take all the technology assets that we have in Government and elsewhere and use them in such a way, fuse the information in such a way, share the information in such a way that we can hopefully prevent future terrorist attacks”

Gov Ridge
Director Homeland Security



Technology Assets, Information Fusion, and Information Sharing

Two Approaches for Homeland Defense

- **Monitoring High Value Targets**
 - Nuclear Facilities
 - Power / Communication Hubs
 - Transportation
- **Assisting “first Responders”**
 - Fire / EMS
 - Tactical Units



Force Protection Approach

Coordinated effort

- **Identify wide variety of FP/HD concerns**
- **Select several overarching applications for FP/HD equipment**
- **Design, integrate and install equipment at a Testbed to enhance FP/HD capability for the selected applications**
 - **Utilize multiple technical approaches where possible**
 - **Focus on capabilities that can be installed quickly with minimal site preparation**
 - **Integrate with existing security system(s)**
- **Conduct controlled evaluations to determine effectiveness**
 - **Push viable solutions forward**
 - **Continue to develop promising, but immature, solutions**
- **Expand testbed to address additional applications**

Initial Testbed Initiatives

Address common FP/HD Applications

Application	Thrust	Initial Technologies
Advanced Access Control	Phased effort to implement a variant of the Army's 'Installation Access Control Point' system	Vehicle Tagging; Smart Cards for personnel; biometric ID verification; vehicle barriers;
Hasty Perimeter Security	Investigate utility of tactical sensors for <u>unfenced</u> perimeter applications	Modified UGS w/GPS; GPS-based PTZ; Thermal & visible imaging; Image Compression; WLAN Comms
Established Perimeter Security	Investigate utility of rapidly installable sensors for <u>fenced</u> perimeter applications	Fence detection system(s) with integrated imaging; robotic assessment
Passive Waterfront Security	Investigate utility of passive sensors (i.e., imagery-based sensors) for waterfront perimeter applications	Video motion detection (VMD) with thermal imagery; VMD-cued pan/tilt assessment
Active Waterfront Security	Investigate utility of active sensors (i.e., marine radar) for waterfront perimeter applications	Marine radar with integrated imaging; image processing for target tracking and location estimation
High Value Asset (HVA) Protection	Investigate utility of rapidly installable sensors for temporarily enhancing security of an HVA	Above-ground, terrain-following cable with integrated imaging; video motion detection; target tracking and location estimation
Urban Sensors for Situational Awareness	Investigate ability to unobtrusively track personnel movements and identify personnel concentrations in an urban environment	Personal After Action Reporting System (PAARS); personnel detection sensor(s); door sensors; custom software
VIP 'Gated Community'	Investigate utility of 'Installation Access Control Point' components for establishing a 'Gated Community'	Automated vehicle access control components; perimeter detection and assessment sensors; video intercom (visitors and deliveries)

9/11 Lessons Learned



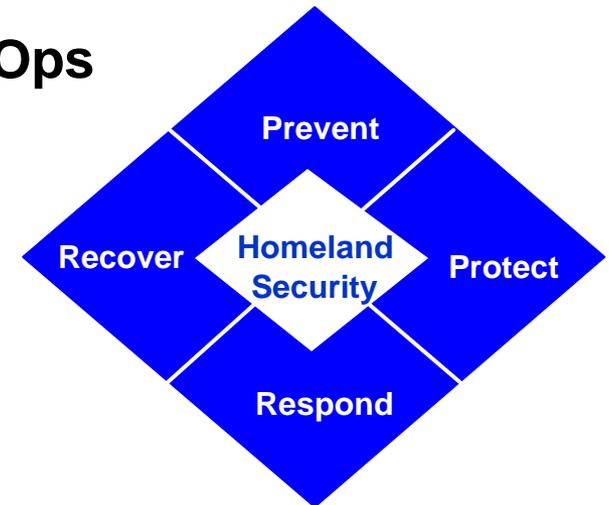
- **Communications, Command & Control and sensors are:**
 - critical
 - limited in civil sector
- **Emergency response plans are:**
 - Based on state/local w/ federal support
 - Limited by budget constraints
- **Common requirements between military and civil missions**
- **Limited life cycle support**
- **Interoperability critical**

Limitations Are:

Technology – Interoperability – Resources -- Sustainment

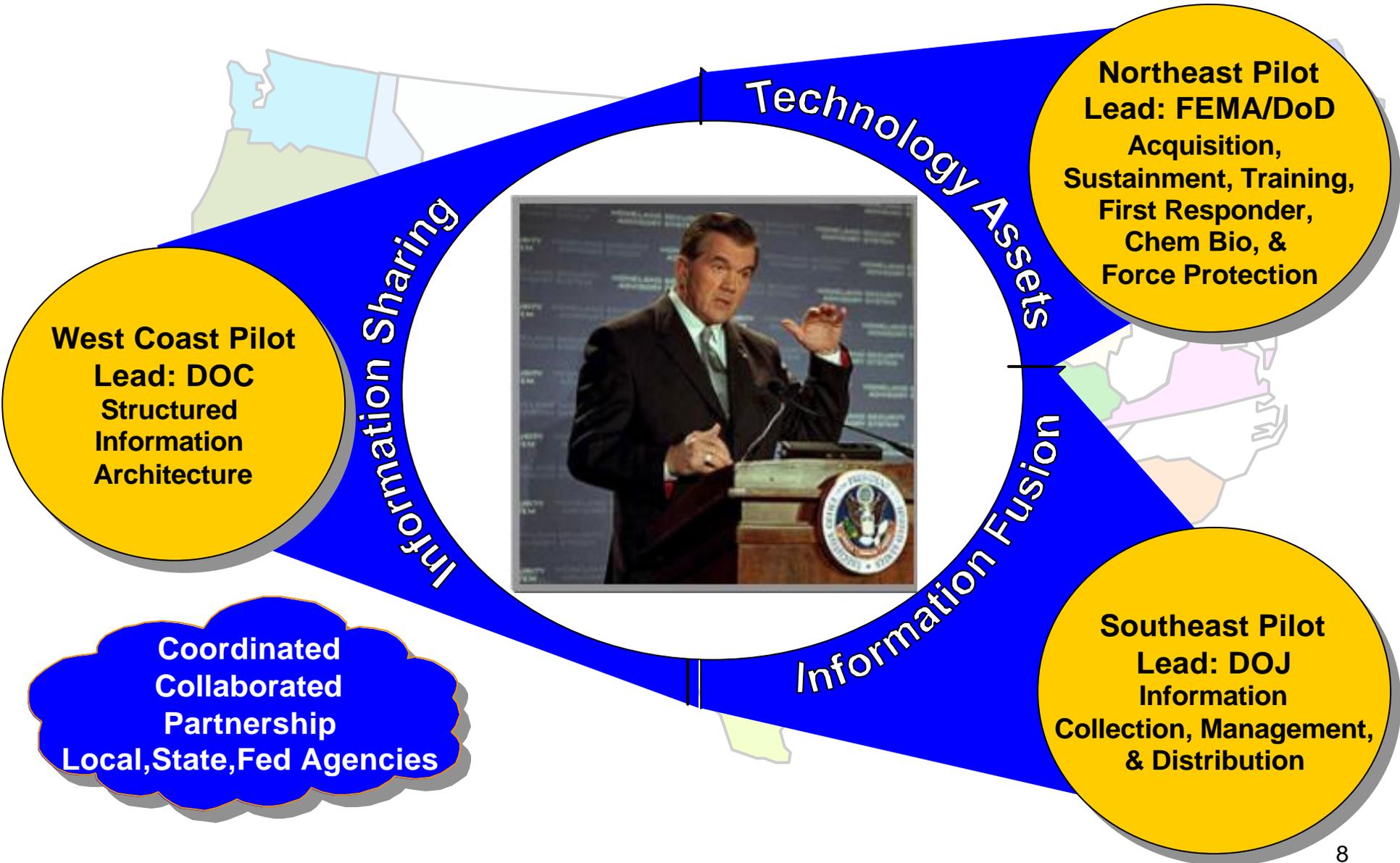
Solution Strategy

- **Develop nationally integrated HLS capability**
- **Develop and implement in rapid but methodical manner**
 - near and long term objectives are cohesive and achievable
- **Develop key elements of an integrated capability:**
 - Transformation of civil structures
 - Leveraging of military technology/ConOps
 - Interoperability (Local, State, Federal)
 - Training
 - Sustainment
 - Affordable



Focused Pilot Structures are Key

Pilot Programs



National Emergency Support Center

Northeast Pilot

- **Leverage the military material acquisition, training and support infrastructure**
 - **Provide tailored, modularized communications, Command & Control, and electronic sensor equipment response packages**
 - Rapid response using State of the Art Technologies
 - Complete development and sustainment support
 - Linked with FEMA/State capabilities
 - Joint Federal, State and Local training
- **Consolidate National/State requirements for organic equipment to-**
 - achieve economy of scale during procurement (cheaper)
 - Interoperability between organizations and maintenance
 - Achieve more robust outfitting of the First response teams nation wide, enhance local day to day search and rescue missions
- **Provide quantities of high end special technologies items which are normally not available (prohibited cost or technology restrictions).**
- **Electronic protection of high value assets**
- **State of the art material solutions for National Guard units**
- **Chem/Bio material solution sets**

National Information Architecture Center

Pilot Program for Information Sharing – West Coast

Interoperability



- Integrating Communication and Command and Control Architecture, training and SW support infrastructure
- Consolidate National/State/Local Command and Control infrastructures

Address Connectivity Requirements with

- Military
- State
- Local
- Borders
- Harbors
- Other Federal Agencies

Information Security



Complex Information Mgr and C2

West Coast Pilot



Software Devel



Rapid/Secure Comms



National Information Management Center

Pilot Program for Information Fusion - Southeast



Airports



Provides Entry Control and Monitoring through Transportation Infrastructure

- Leverage the National State and Commercial infrastructures
- Demonstrate Enhanced Capabilities between the National and State through controlled experimentation



State DMV

Connectivity through HLS Control Architecture with

- Federal
- State
- Local



Universities



Seaports



INS entry points

Data must be accessible to all agencies

Alerts!

Southeast Pilot

National Support Centers

Development Roadmap

- Establish collaborative arrangements for requirements definition, design, assessment, and operations with organizations such as:
 - Federal Emergency Management Agency (FEMA)
 - Department of Justice (FBI/INS)
 - General Services Administration (GSA)
 - Department of Defense (DoD)
 - State/Local Agencies



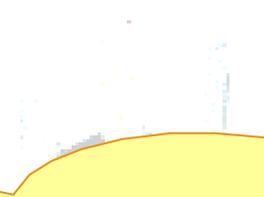
Urgent Need ... Aggressive Approach ... Operational in 6-18 Months

Summary

**Money does not equal success
Focused Investment Does!!**



I LOVE YOU
AUNT SAMANTHA
QUESTIONS



WE MISS YOU
I LOVE YOU

