Homeland Security:
Requirements for Installation Security
Decision Support Systems

COE post 9 / 11

- CONUS and OCONUS installations must be prepared for and capable of preventing terrorist, criminal and other threats.
- TDA installations require command, control, and situational awareness based on reliable sources of focused operations and intelligence information.
- MACOM and installation commander need seamless exchange data on personnel, indicators and events that uncover activity and trigger decision points.

PRISM

Installation Security Requirements Defined

- Instantaneous inter/intra-agency communication.
- Access to a Common Operating Picture (COP).
- Remote Monitoring of alarm or Sensor systems (chemical, biological, radiological, and nuclear).
- Location tracking of assets in real time.
- Automated public alert and recall or notification of essential and key personnel.
- Tie-in to law enforcement criminal background check systems
- Integrated Decision Support System

What has been done to date to develop a DSS?

- At least 4 systems have been developed to perform some or all requirements:-
  - Joint Protection Enterprise Network (JPEN)
  - Joint Warfare and Reporting Network (JWARN)
  - Area Security Operations Command and Control (ASOCC)
  - Prism (Protect, Respond, Inform, Secure, and Monitor)

PRISM Overview

- PRISM is a Homeland Defense application standing for Prepare, Respond, Inform, Secure, and Monitor

- PRISM provides command and control technology…
  - For the Federal Government in support of Department of Defense force protection requirements and Department of Homeland Security needs
  - For State and Local Government to direct and synchronize the activities of first responders
  - To facilitate collaboration among federal, state, and local governments.

- PRISM was born out of IDM-T

Required capabilities include the necessity to…

- Operate a robust electronic communications system linking the IOC with all installation public safety, medical, and emergency response agencies with adjacent military and civilian headquarters/agencies.
- Identify and track installation participation in disaster relief operations to ensure efficient and effective crisis response.
- Track critical installation crisis response assets to provide visibility and effectively manage crisis operations.
- Provide links between the installation and local law enforcement to identify and deter potential threat to the installation.
- Monitor and analyzes CBRN intelligence threats; Provide a SA/C2 response capability that mitigates repercussions of CBRN attacks.

PRISM

Force Protection/Homeland Defense

P REPARE

- Provides Garrison Commander / IOC with a Decision Support Tool
- Provides a COE for information analysis, dissemination, and sharing
- Assures inter-agency interoperability
- Enables Scenario planning
- Provides situational/threat awareness

R ESPOND

- Provides disaster / event notification through Message 911 component
- Provides a C2 capability during emergency operations
- Enables alert messaging, incident reporting, GPS asset tracking

I NFORM

- Based on open standard web portal technology for easy access
- Provides a COP across agencies and installations
- Linkage to all responders/agencies that have access to the network
- Provides immediate CBRN sensor alert notice to users
- Provides immediate incident reporting and messaging

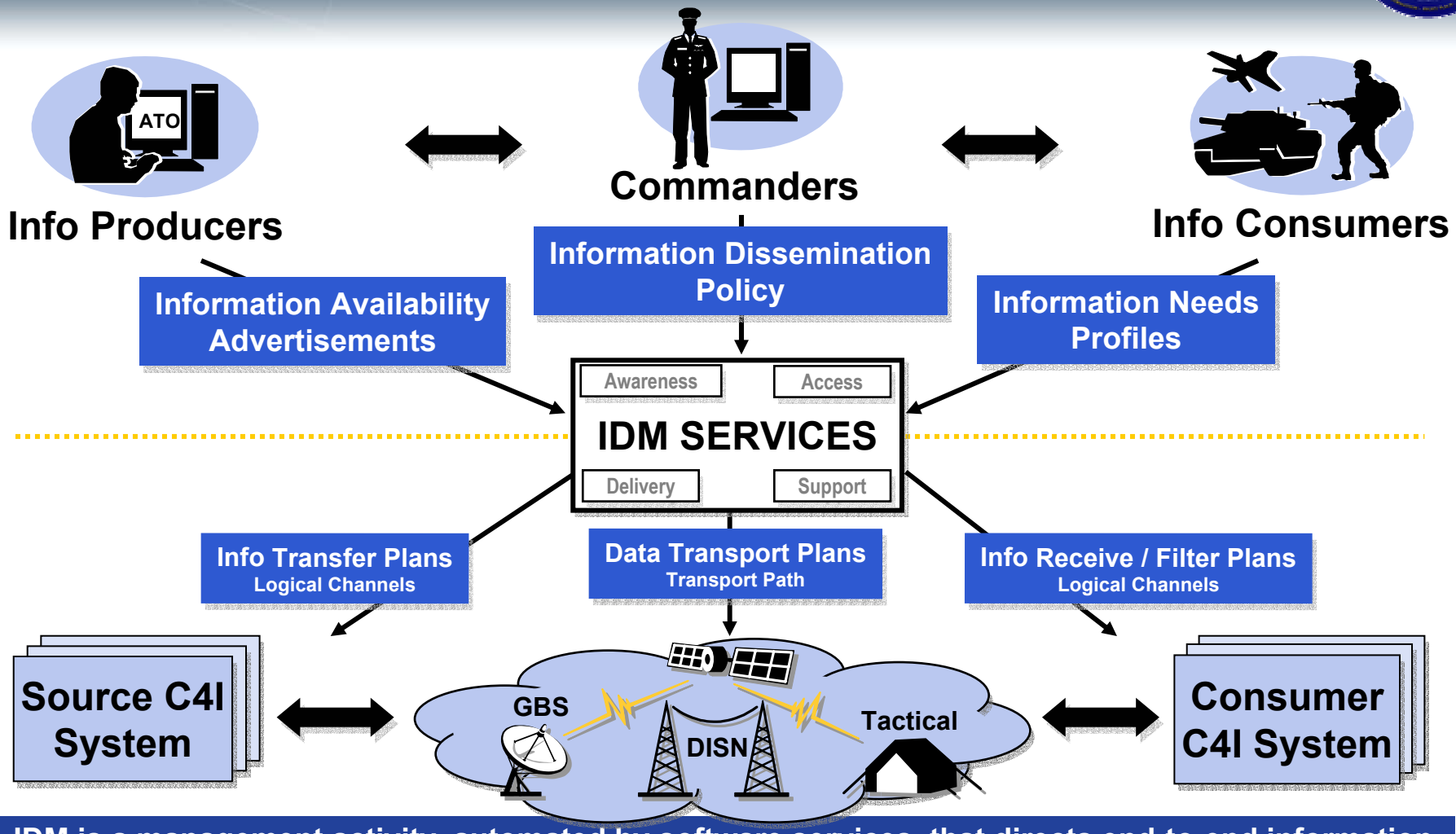
S ECURE

- Data is safeguarded in a protected database
- Access is controlled through security policy
- Shared information is pushed or pulled from system directories

M ONITOR

- Based off of a Tailored and configurable Regional / Installation / City map
- Allows situational input from local, state, and federal producers
- Aggregates sensor data into one COP (webcams, chem/bio, etc)

Foundational Technology in PRISM



IDM is a management activity, automated by software services, that directs end-to-end information flows throughout the GIG based on commanders policy.

Transsend™ is an Enterprise Messaging Product, offering a fully functional Java Messaging Service (JMS) 1.02b implementation.

EAMC

FEMA Region IV

BCBL(G)

EMA

Provided an opportunity for coordination and communication between various public, private, local, state, federal agencies and supported activities in the execution of WMD/HAZMAT multi-casualty incidents using the PRISM prototype

Ft Gordon IOC

FBI

MCG

CTA

Consequence Management 2002

FEMA Region IV

Ft Gordon IOC

BCBL(G)

Provides an opportunity for coordination and communication between various public, private, local, state, federal agencies and supports activities in the execution of multi-casualty incidents using PRISM

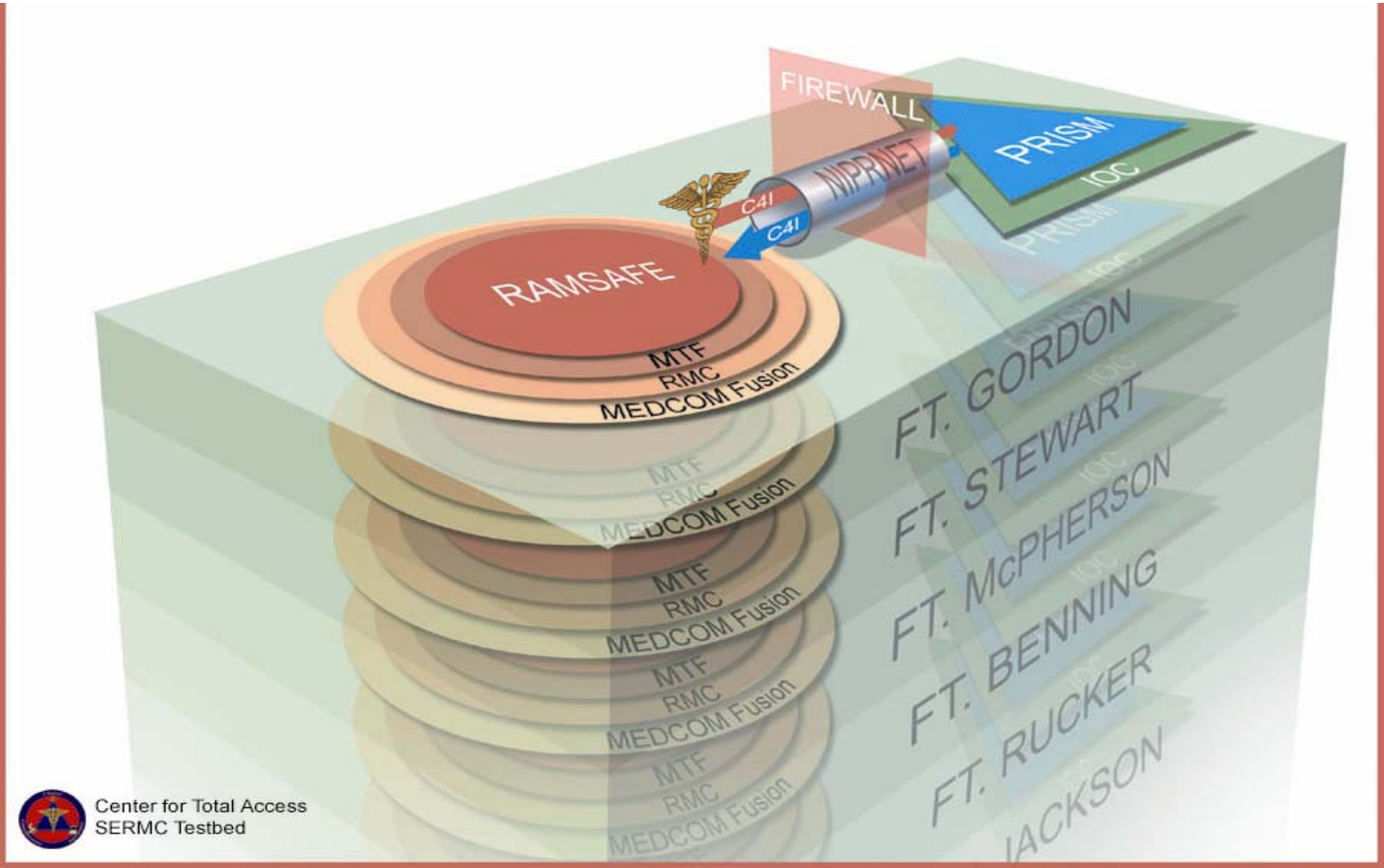
Army IMA

MCG

CTA

PRISM

Medical Fusion Information Management Concept



Center for Total Access
SERMC Testbed

PRISM Components

- **Solers Transcend**
  - Open standards; web-based access requires only a browser on the client machine
  - Incident report tracking
  - Tasking and facility reporting
  - Request for Information
  - Information sharing and collaboration
  - Search for information
  - Transsend™ enterprise messaging for assured delivery of information among distributed PRISM nodes.
  - Local management of each distributed node
  - Shared situational awareness among nodes

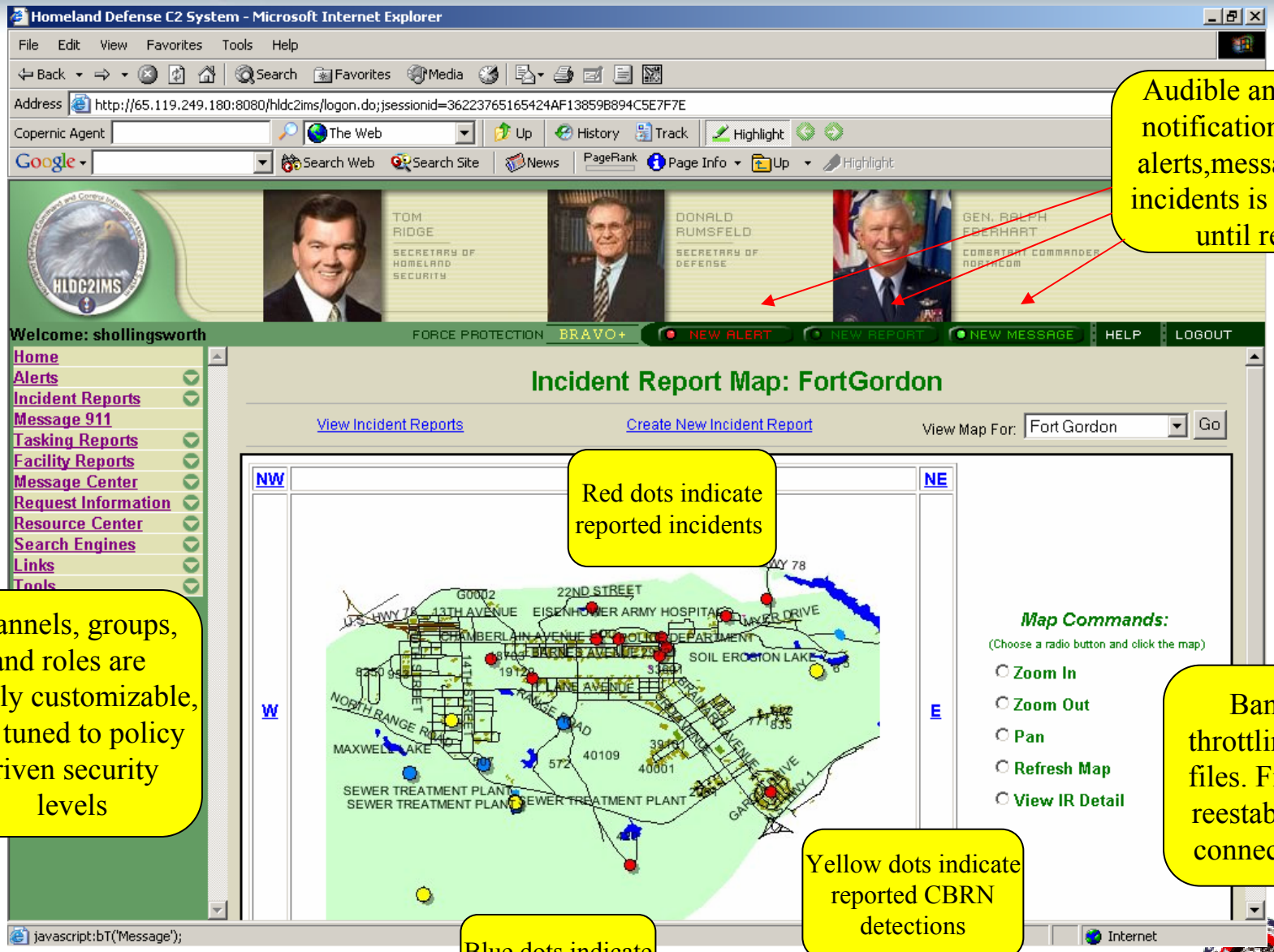
- **Calling Post Communications Message911™**
  - Delivers thousands of emergency notification messages in seconds via phone, e-mail, or pager.
  - Powerful mapping selections integrated with notification system to allow geographic selection of those to notify.
  - Integration with ENSCO Sentry allows notification based on CBRN plume.
  - Web-based interface enables access to Message911™ services from any location.

- **ESRI® ArcIMS®**
  - Provides web-based access to maps and geographic data and services.
  - Operates in conjunction withArcGIS suite of products.
  - Provides map display for PRISM onto which incident reports, CBRN events, and first responder locations may be georeferenced.
  - Supports map display with configurable layers for the local facility.
  - Incident geo-referencing.

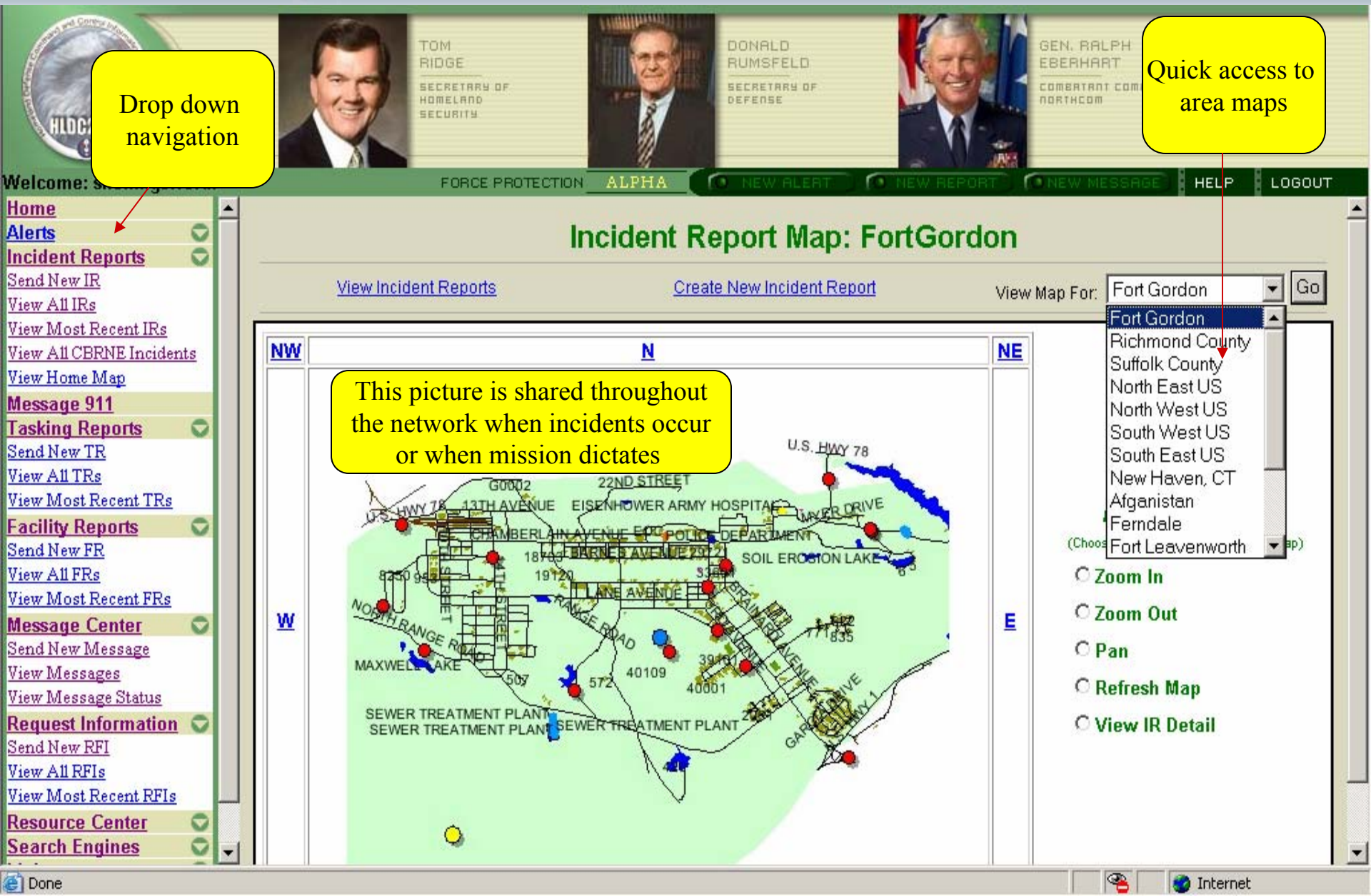
- **LunarEye™ LE2000™**
  - Asset tracking devices hosted in first responder vehicles
  - Provides geolocation of vehicles to PRISM, enabling tracking of first responders on map display

- **ENSCO Sentry**
  - Automated sensor integration
  - Protects facilities and borders from intrusion and Chemical, Biological, Radiological, and Nuclear attack

PRISM Release IV - GUI

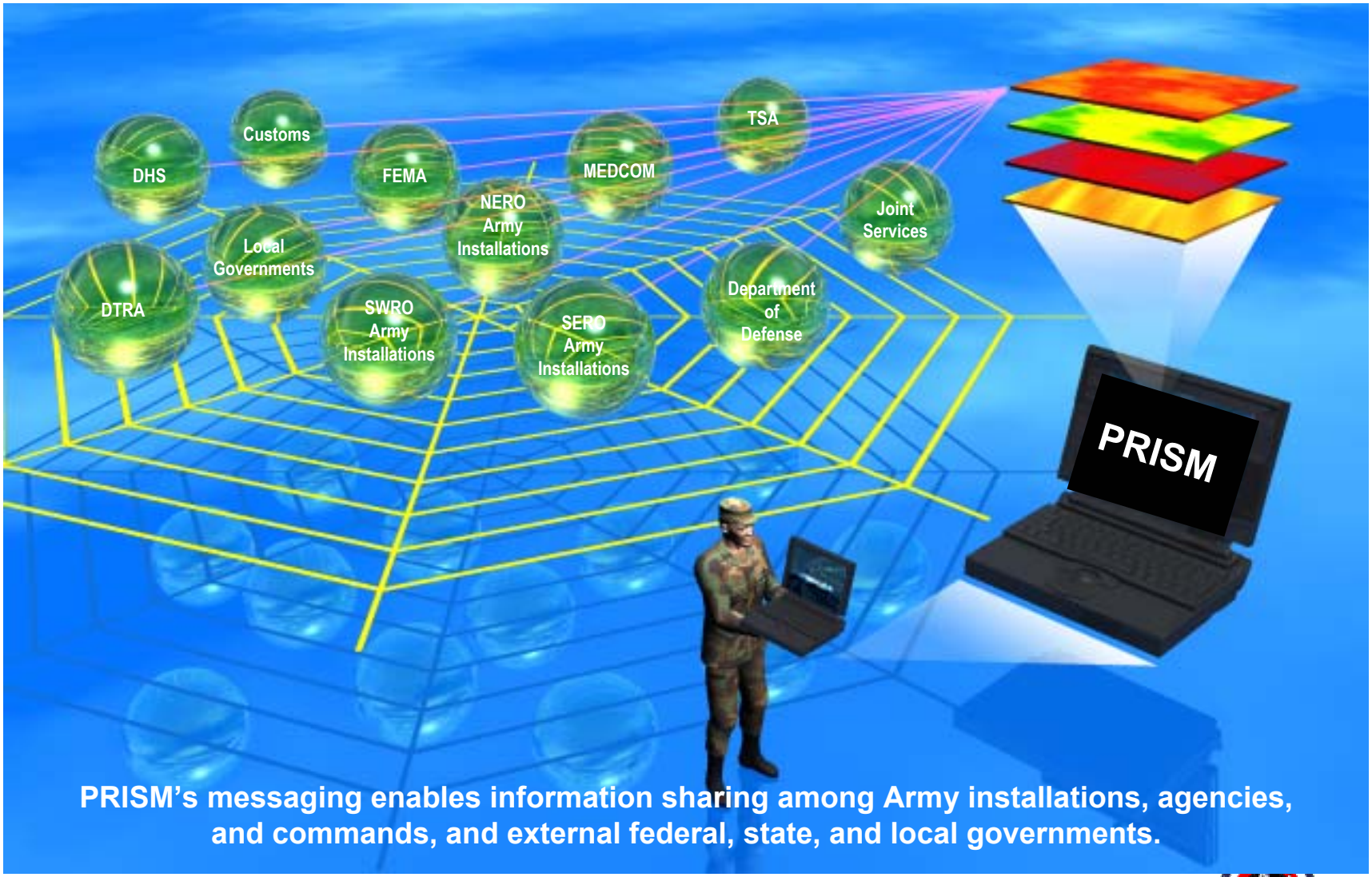


PRISM Release IV - GUI



PRISM

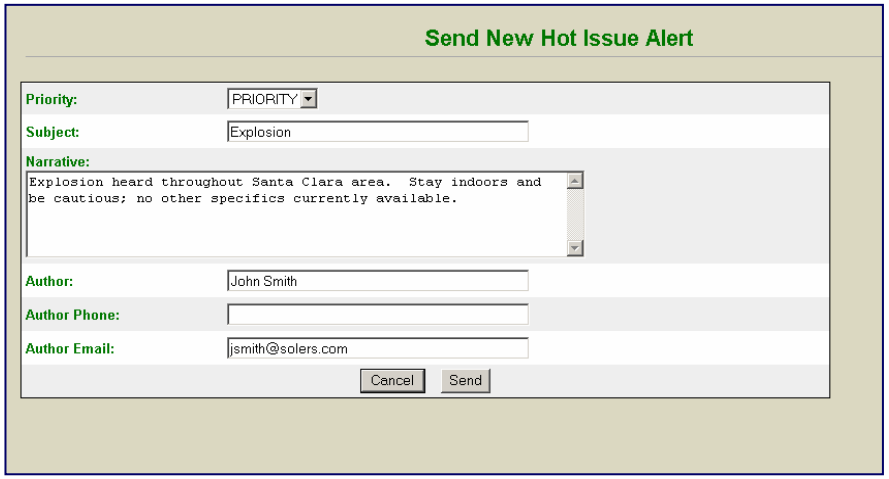
Enterprise Messaging Distributes PRISM Portals Across a Network-Centric Environment



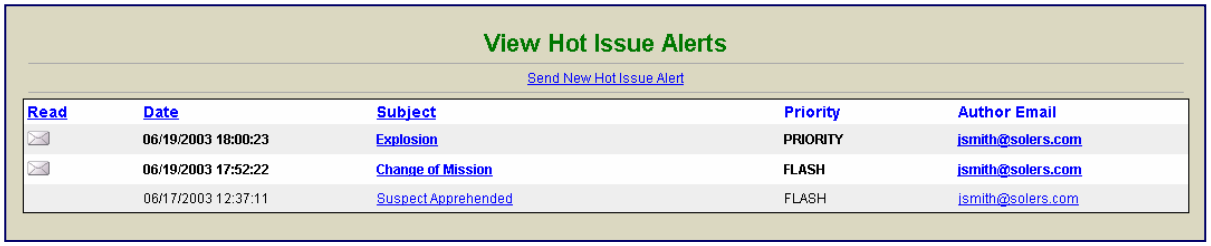
PRISM's messaging enables information sharing among Army installations, agencies, and commands, and external federal, state, and local governments.

Alerting Capabilities

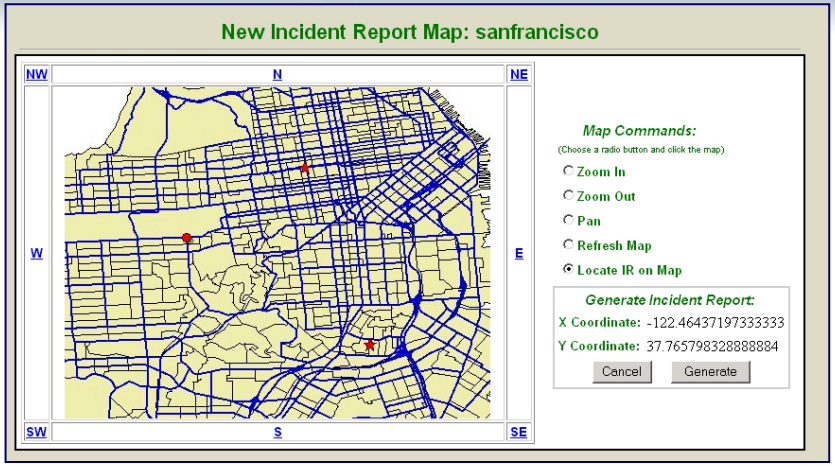
- PRISM generates alert messages that are sent to all portal users.
- Intended to provide collaborative capabilities for early notification of critical issues to a wide audience.
- Form utilized to enter alert and send.

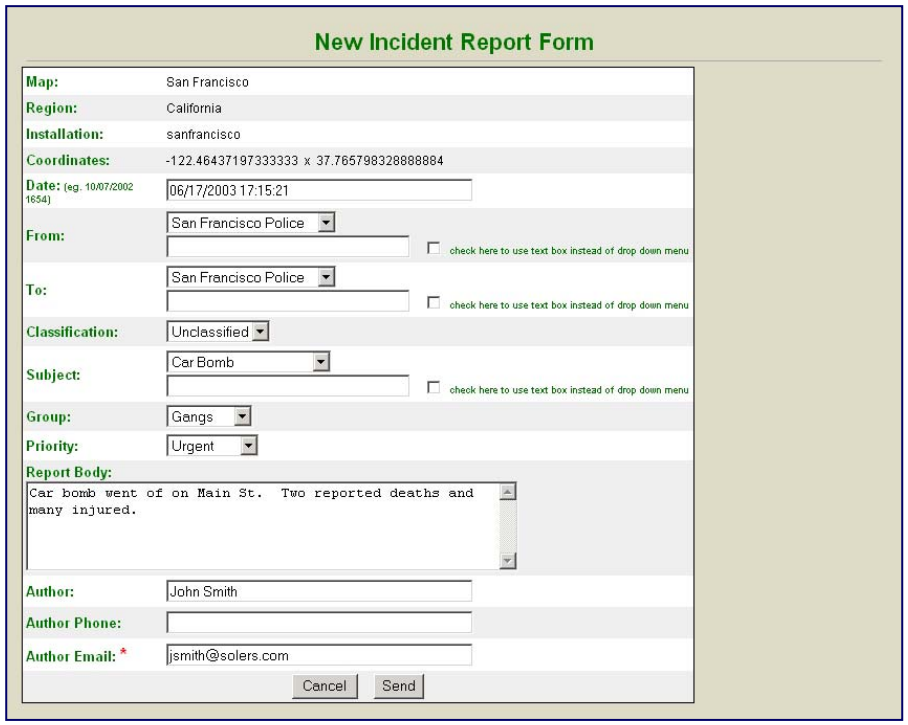


- Users may view all alerts that have been received, or just recent events.
- Visual and audio notification provided when new alerts are received.



Incident Reporting





- Incident reports are generated and linked to a particular Lat/Long on the map.
- Drop down lists and automatically populated fields are provided to ease the Incident Report entry process.
- Incident reports are delivered via Transsend to all portals and plotted on the map (in red) as they are sent.

Other Reporting

- Additional reporting mechanisms are available for:
  - Tasking Reports
  - Facility Reports
  - Messaging
  - Requests for Information (RFI)

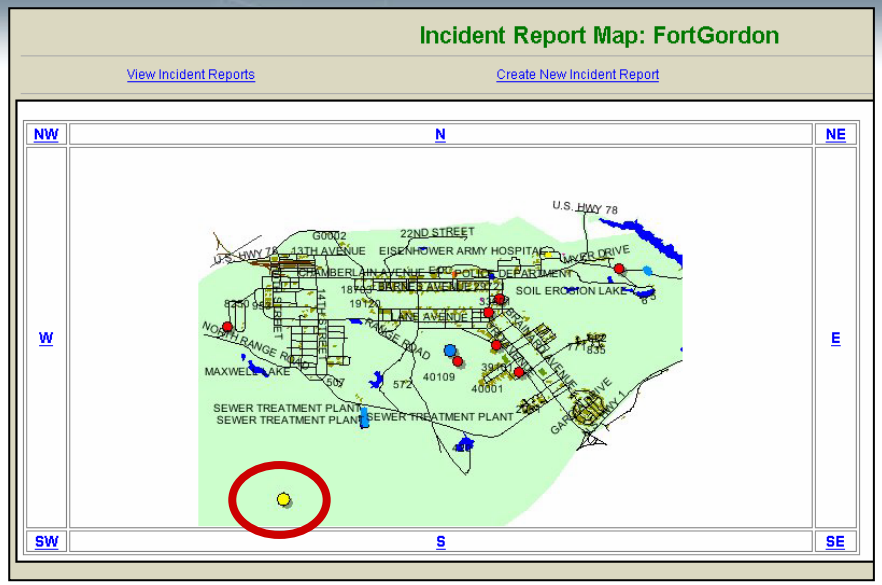
- Pre-defined forms are utilized with drop-down lists and automatically populated fields for ease of entry.
- Information entered is delivered via Transsend to all PRISM portals.

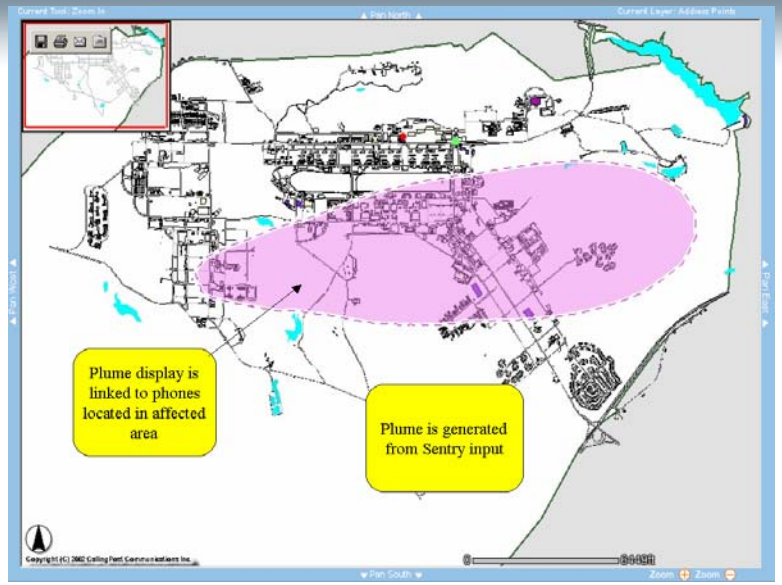
Searching for Information

- Links to commercial and Government search engines are integrated into PRISM.
  - This allows users to locate and retrieve information in support of first response operations.
- Additional links to relevant, external sites may also be added.

PRISM

CBRN Sensors

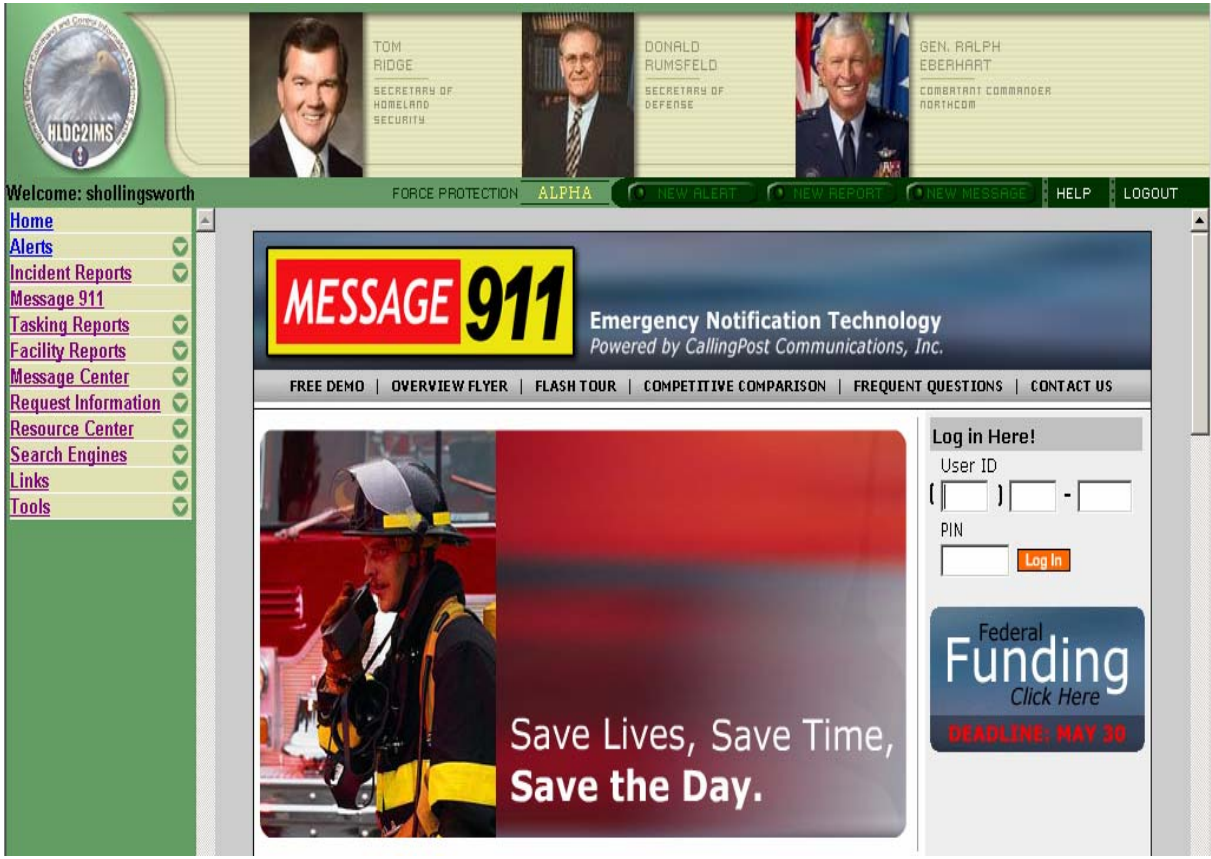




- CBRN sensors from ENSCO Sentry are integrated with PRISM.
- Sentry Sensors may be positioned to detect CBRN events.
- Upon detection, a message is automatically generated and received by PRISM.
- The event is plotted on the map (yellow dot) and information on the event can be accessed by the user.
- Sensor input can be used to generate downwind plume information which may be linked to phones in the affected area.

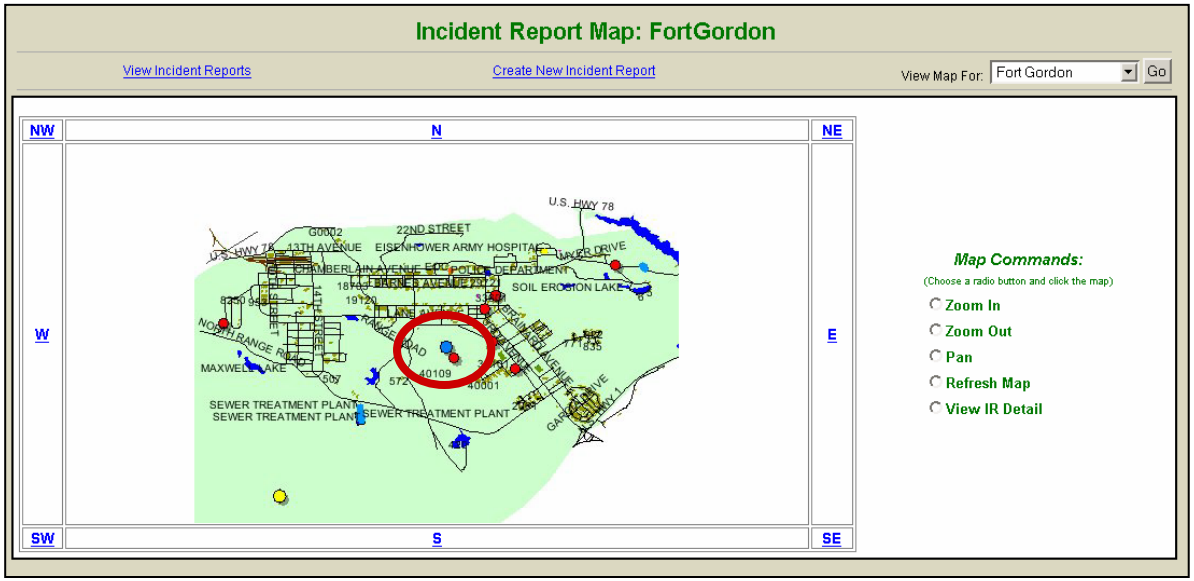
Message 911 - Emergency Notification Technology

- COTs voice notification system designed to meet critical emergency alert situations. Message immediately reaches first responders, and every person in a command, organization, agency, or geographical area.
- Controlled from any phone or web browser anywhere and anytime. It can deliver to land lines, cell phones, pagers, mobile radios and PDA's.
- Message may be recorded using voice or text-to-speech. Capability to deliver more than 3,000 calls per minute.
- May activate other devices such as sirens and public address systems.
- GIS ready. Mapping tools seamlessly integrate map selections directly with notification system.
- Calls are automatically placed to all telephones within a geographic area.
- Integrated with ENSCO Sentry software to allow CBRN events to drive the geographic region that will be called.



PRISM

First Responder Tracking



- First Responder Tracking from LunarEye is integrated with PRISM.
- LunarEye hardware is placed in the first responder vehicles and emits a GPS signal that makes the location of the vehicle available to PRISM.
- The vehicle location is plotted on the map (in blue) and periodically updated.

A PRISM Scenario…

- A terrorist releases a biological agent in a populated urban area:
  - The Sentry Sensors positioned within the area detect the event and report it to PRISM. The event is plotted on the map and the user is alerted.
  - Human intelligence from the scene results in an Incident Report being entered from a command post using the PRISM software and it is plotted on the map. An alert is issued using PRISM at the same time.
  - The Message911™ software is utilized to automatically notify residents of the community to stay indoors.
  - The progress of First Responders moving towards the incident is tracked on the PRISM map using the LunarEye™ integration.
  - Terrorists are seen leaving the area and an alert is issued using PRISM to state and local law enforcement agencies.
  - The state/local law enforcement officials track the terrorist, while collaborating using the PRISM tool. Collaboration facilitates synchronization of law enforcement actions as they move in on the terrorist.
  - The terrorist is detained and all responding officials are alerted to the capture via a PRISM alert.

QUESTIONS?