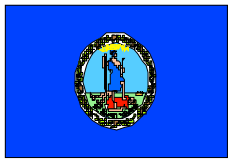
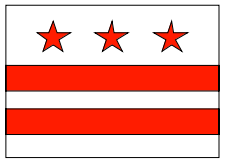
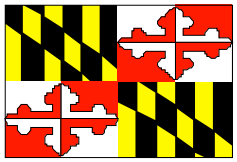
CAPWIN

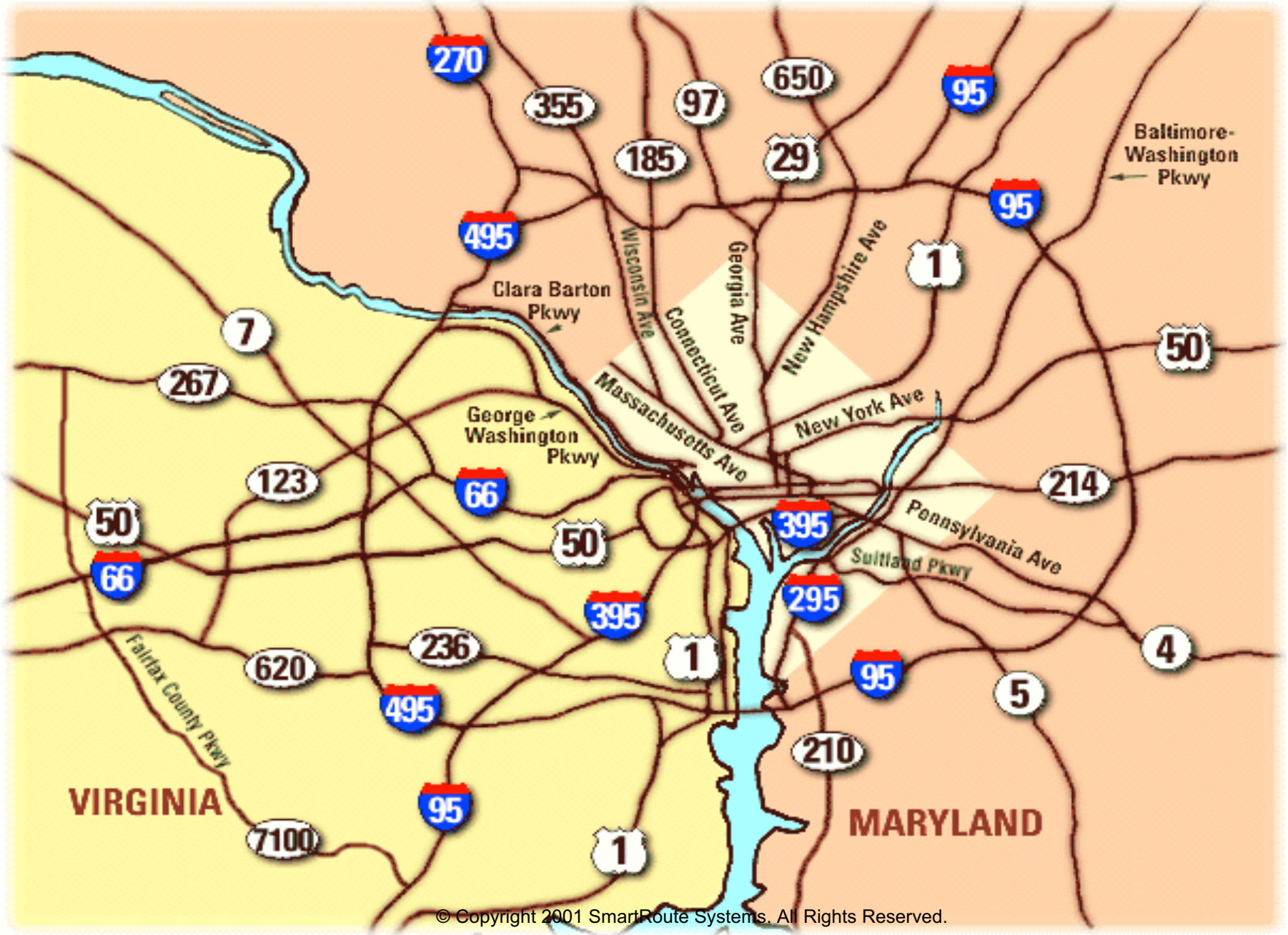
Capital Wireless Integrated Network



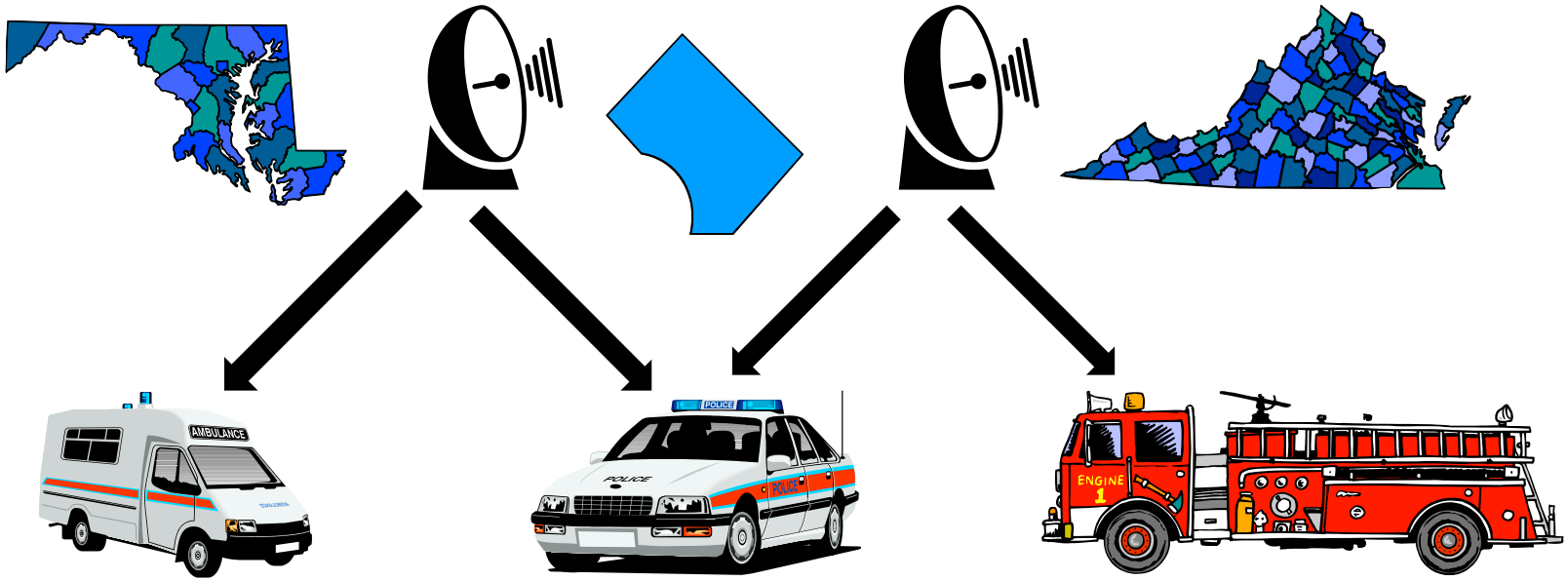




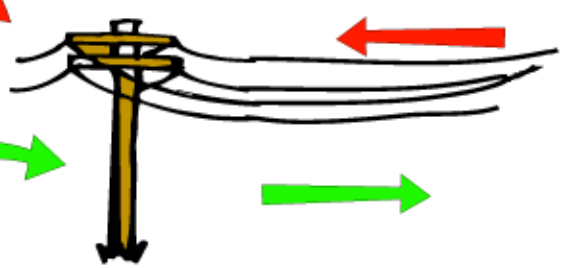
Building a Bridge in Public Safety and Transportation Communications

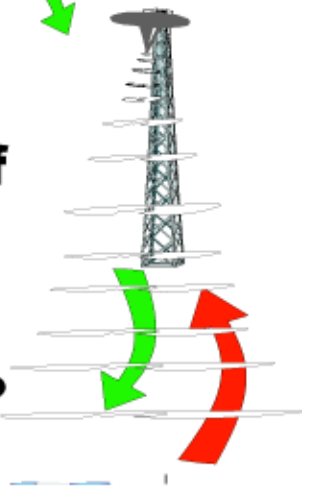


INCOMPATIBILITY



Incompatibility has been a problem for many years in public safety and transportation agencies. The events on 9/11 highlighted the problem.





Should we have to depend on this roundabout, antiquated system of communication to protect and serve the public? Should our citizens' safety rely on such a chaotic process?

NEWS REPORTERS CAN SEND IMAGES AND REPORT STORIES ANYWHERE IN THE WORLD BUT PUBLIC SAFETY REPONDERS CAN'T TALK TO EACH OTHER IN THE SAME CITY.

IS THERE SOMETHING WRONG WITH THAT PICTURE?

CAPWIN

Capital Wireless Integrated Network

Building a Bridge in Transportation and Public Safety and Communications

Multi-State Project

CapWIN – a vision for the first multi-state wireless integrated network . This network is built on partnerships and will stand as a model for the country.

CAPWIN
Capital Wireless Integrated Network

Building a Bridge in Transportation and Public Safety and Communications

PARTNERSHIPS

- ***Partnerships are the foundation of integrated systems***
- ***Open communication with other agencies.***
- ***Building trust and relationships with other organizations and the public.***
- ***Enables inter-agency partnerships that:***
  - ***Have input from aspects of the community.***
  - ***Share governance and direction of solutions.***
  - ***Share resources, development, and existing information with all agencies.***

CAPWIN
Capital Wireless Integrated Network

Building a Bridge in Transportation and Public Safety and Communications

PARTNERSHIPS

- ***Provide direct interagency communications and information.***
- ***Provide "real time" information to all agencies.***
- ***Better use of limited resources.***
- ***No duplication of efforts.***
- ***Provide critical information for responders and decision makers.***
- ***Have public support and understanding.***

- ***WE MUST CHANGE THE WAY THAT WE DO BUSINESS TO BETTER SERVE AND PROTECT THE PUBLIC.***

The major strength of CapWIN is the Partnerships

- Each Agency involved has input into the process
- Governance is shared in CapWIN
- Executive Board makes all major decisions and is the final authority.

CAPWIN

Capital Wireless Integrated Network

Building a Bridge in Transportation and Public Safety and Communications

WE HAVE TO LEARN TO SHARE RESOURCES AND PARTNER TO SOLVE COMMUNICATION INOPERABILITY. TECHNOLOGY IS NOT THE MAJOR ISSUE.

CapWIN EXECUTIVE GROUP LEADERSHIP

Chairman
Chief Charles Samarra, Alexandria Police Department, Va

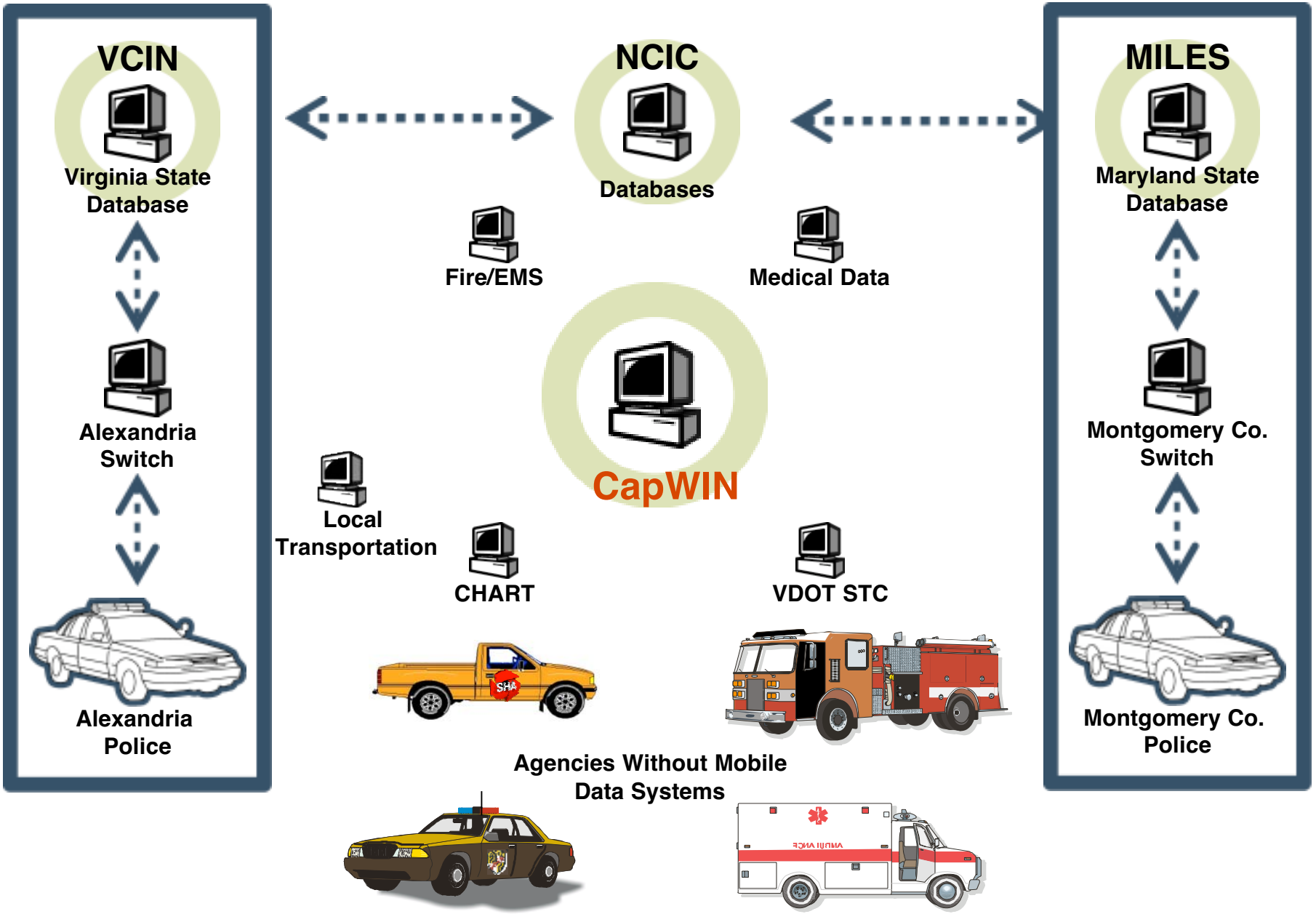
Vice Chairs
Deputy Mayor Margaret Kellems,
District of Columbia
Councilman Jim Estepp, Prince George County, Md
Chief Ed Plaugher, Arlington Fire Department, Va.

CapWIN

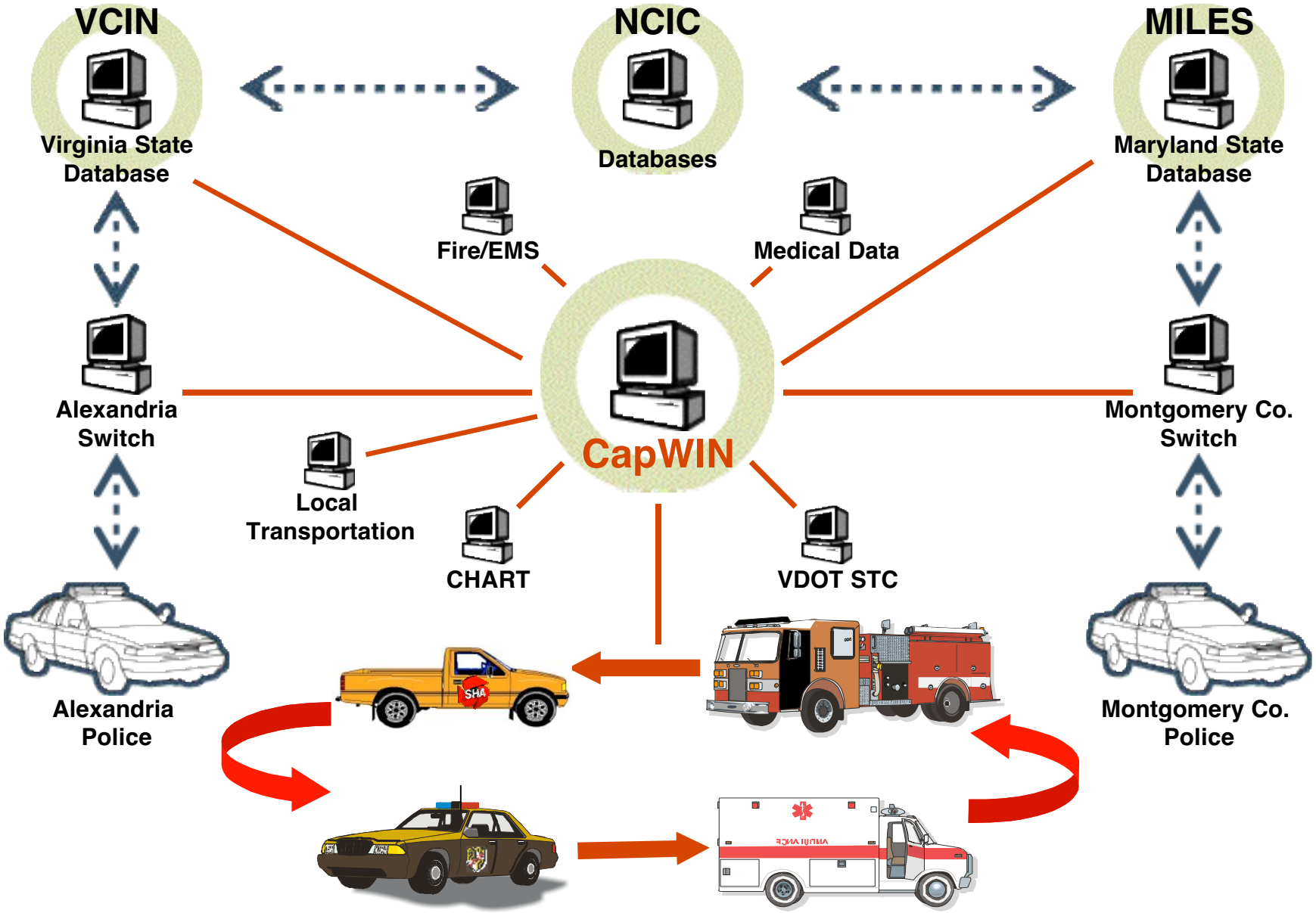
Participating Agencies

District of Columbia	Maryland	Virginia	Federal Agencies	Other Agencies
Washington Metropolitan Police	Prince George's Co. Police Department	Alexandria City Police Department	United States Park Police	International Association of Chiefs of Police
Washington Fire and EMS	Prince George's Co. Fire Department	Alexandria City Fire Department	United States Department of Justice/National Institute of Justice	International Association of Fire Chiefs
Emergency Management Agency	Montgomery Co. Division of Police	Arlington Co. Fire Department	United States Department of Transportation	National Institute for Missing Children
D.C. Public Works	Montgomery Co. Division Fire & Rescue Services	Arlington Co. Police Department	Public Safety Wireless Network	
Washington Metropolitan Transit Authority	Maryland State Police	Fairfax Co. Police Department	Federal Bureau of Investigation	
Metropolitan Washington Council of Governments	Maryland State Highway Administration	Fairfax Co. Fire Department	United States Capitol Police	
	Maryland Emergency Management Agency	Virginia Department of Transportation		
	Maryland Institute for EMS Systems	Virginia State Police		
	Prince George's Co. Department of Public Works	Emergency Management Agency		
	Montgomery Co. Department of Public Works	Virginia Emergency Medical Services		

Without CapWIN: No Mobile Communication or Information Access



With CapWIN: Enhanced Mobile Communications & Information Access



The First Responder Interoperability Challenge

- Effective incident management for transportation and public safety agencies requires coordination and information sharing among multiple responders.
- Incident response and scene management is hampered by the inability of agencies to communicate, particularly

The First Responder Interoperability Challenge

- Fragmented and indirect communication takes time and adds unnecessary delay and risk.
- The inability to communicate is evident during major traffic incidents, and other events including school violence, major crimes, train and aircraft accidents, major fires, and major weather events.

CapWIN Requirements

- Mobile Data Interoperability
  - **Three Key Functions:**
    - ✓ **Messaging**
    - ✓ **Federated data source access**
    - ✓ **Incident Management**
  - **Legacy systems**
  - **Browser-based approach for agencies w/o legacy**
- Open, standards-based, modular, scalable architecture
- COTS-based, minimum development

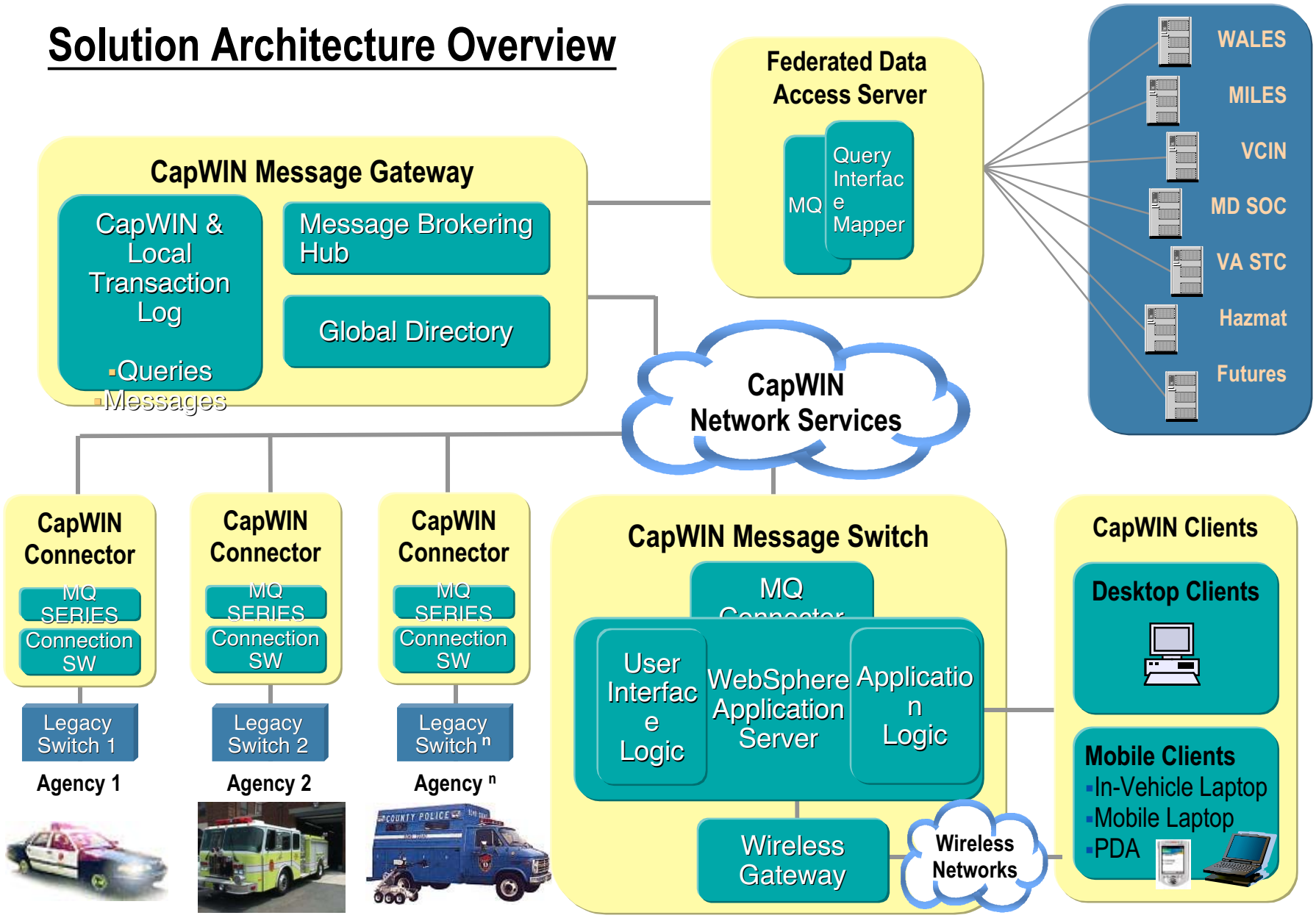
CapWIN Requirements

- High availability (redundant)
- Highly secure
- Low total cost of ownership
- Low risk approach
- Public and private wireless network support

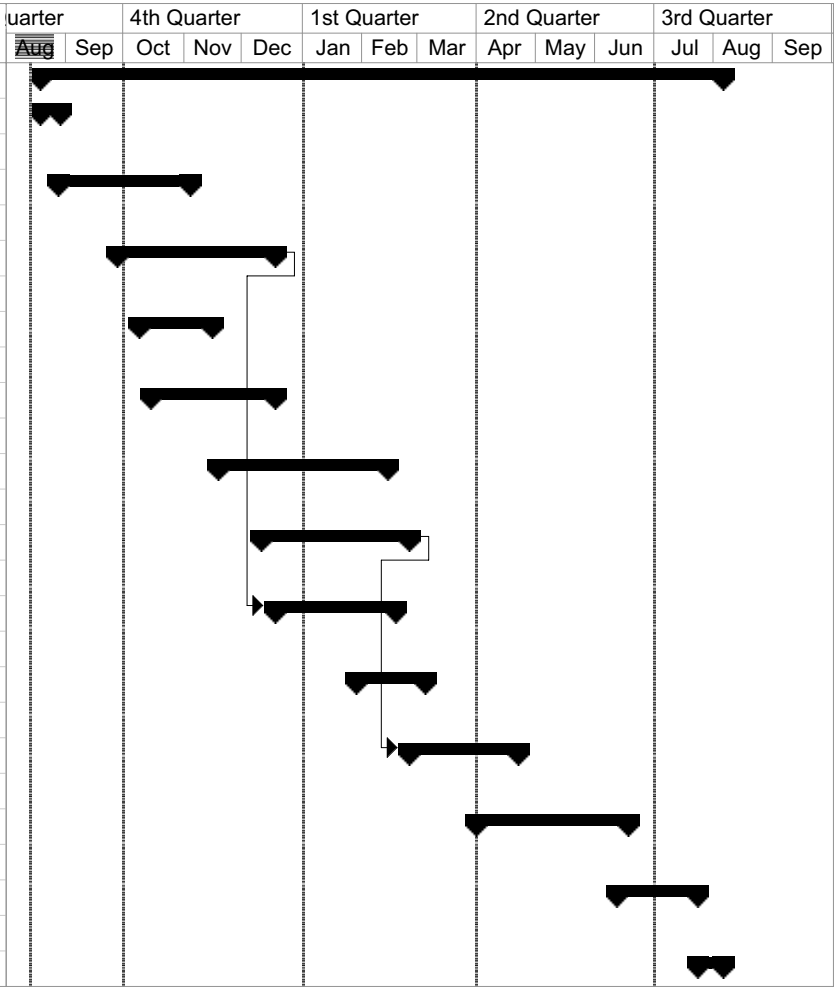
IBM CapWIN Solution Highlights

- Minimal impact to legacy systems
- Open, scalable, reliable Web-based architecture
- Efficient use of limited bandwidth
- Technology standards
- Extensive COTS use
- Low Total Cost of Ownership (TCO)
- Security
- Experience and past performance

Solution Architecture Overview



ID	Task Name
1	**CapWIN Project**
2	**Solution Startup & Monitor Task Orders One, Two and Three**
246	
247	**Solution Outline - Task Orders One, Two and Three**
312	
313	**Macro Design - Task Orders One and Three**
355	
356	**Install Test Environment**
366	
367	**Micro Design - Task Order One**
430	
431	**Build Cycle - Task Order One**
462	
463	**Deployment - Task Order One**
491	
492	**Macro Design - Task Order Two**
532	
533	**Establish Test Environment - Task Order Three**
539	
540	**Micro Design - Task Order Three**
600	
601	**Build Cycle - Task Order Three**
635	
636	**Deployment - Task Order Three**
670	
671	**Solution Close - Phase 1**



CapWIN Incident Management

- The incident management capabilities of the CapWIN solution are focused on enabling enhanced tactical, inter-agency communications, with minimal impact to legacy systems.

- The heart of IBM's solution, the CapWIN Message Gateway, consists of two fundamental components:
  - **A Message Hub**
  - **A Global Directory**

- Operational simplicity is imperative.

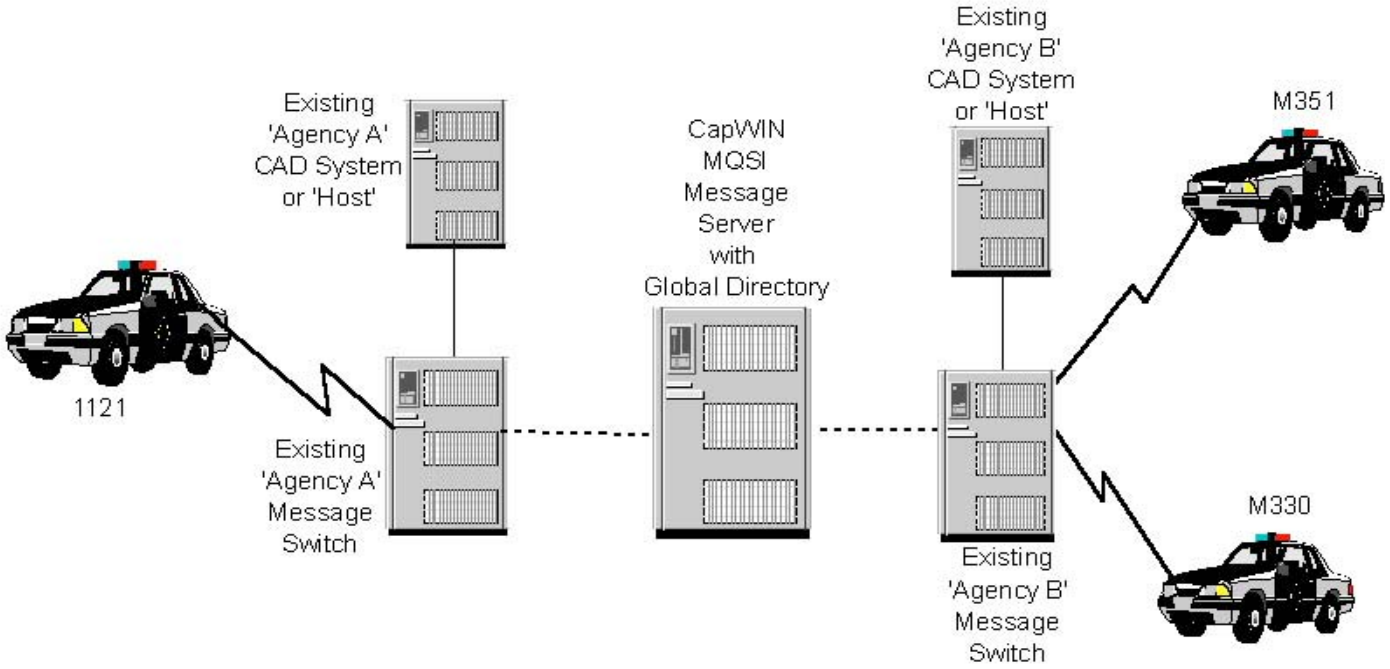
Incident Management Functions

- Create a group in the CapWIN Global Directory.
- Add one's own name, someone else's name, or another group name, as a "member" of a group.
- Compose a message for a group and transmit the message to recipients in different agencies (as well as in the originator's agency).
- Display the message on the CapWIN interactive GUI or legacy display mechanisms.

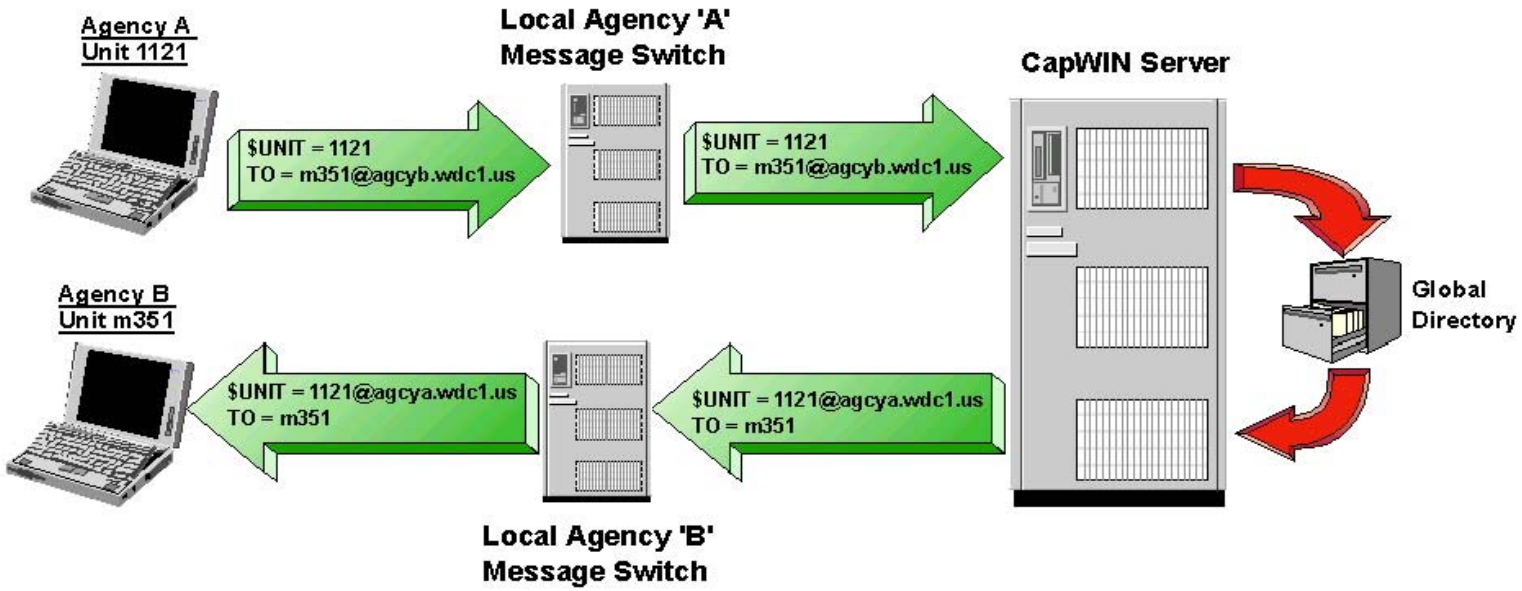
Incident Management Functions

- Respond to an incident-related message.
- Remove a group.
- Query the Global Directory to determine what groups are currently active.
- Query the Global Directory to determine what User Id's, by group, are currently logged on.

The CapWIN Global Directory: Logical Context



The CapWIN Global Directory: Address Translation



CapWIN Program Sponsors

CAPWIN
Capital Wireless Integrated Network
Building a Bridge in Transportation and Public Safety Communications

- U.S. Department of Justice, Office of Domestic Preparedness
- Maryland State Highway Administration
- Virginia Department of Transportation
- U.S. Department of Transportation (FHWA)
- National Institute of Justice, Office of Science and Technology's Project AGILE
- Public Safety Wireless Network (PSWN)

PUBLIC SAFETY PSWN PROGRAM WIRELESS NETWORK

Project Contact Information

www.capwinproject.com

Tom Jacobs /301-403-4594/ tjacobs@wam.umd.edu
George Ake /301-403-4601 / gake@wam.umd.edu
Fred Davis / 301-403-4592/ fbdavis@wam.umd.edu
Bruce Barney/301-403-4531/ bbarney@wam.umd.edu
Mike Hill / 301-403-2971 / hillm@wam.umd.edu
Bill Henry/301-403-4533 / henryb@wam.umd.edu
Center for Advanced Transportation Technology
University of Maryland