



Learning To Talk
Using Technology to
Tear Down
Institutional Walls





Overview

- **Why haven't we been communicating with others?**
- **What made us want to change?**
- **How are we fixing the problem?**
- **What were the challenges in learning to talk with each other?**
- **What are our successes (lessons learned)**





Presenters

- **George Ake**
 - Retired Major, North Carolina Highway Patrol
 - Project Manager, Capital Wireless Integrated Network
- **Sergeant Charlie Guddemi**
 - Statue of Liberty E-Smart Program
- **Lieutenant Dave Mulholland**
 - Commander, IT & Communications





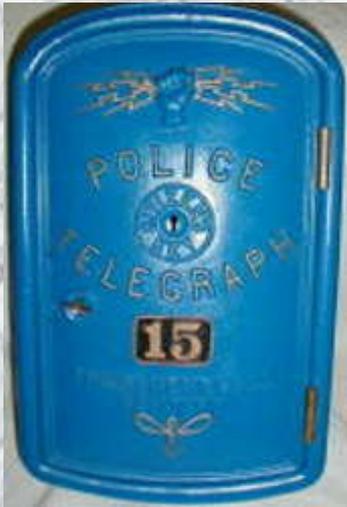
Agencies or Islands?

- **Competing funding**
- **A culture of independence**
- **No standards for interoperability-
vendors provided proprietary systems**
- **Technology inhibited communications**





A Historical Perspective





Why Change Now? The New York Experience





Statue of Liberty

- **Security and a positive visitor experience has always been our goal**
- **Vulnerabilities have always existed**
- **Issues: lack of \$, lack of expertise, lack of concern**
- **“It will NEVER happen here.”**
- **Prior events**





Communication problems in the Washington D.C. Area

Air Florida Flight 90 and Metrorail derailment- January 13, 1982

First Metrorail passenger fatalities occur when rail car derails at a crossover switch south of Federal Triangle and is pulled sideways into abutment separating inbound and outbound tunnels. Three are dead, 25 injured. Investigations identify human error as primary cause. Crash is preceded by a major snowstorm, early release of federal employees and crash of Air Florida Flight 90 into 14th Street Bridge and Potomac River.

Air Florida

4:01PM

74 killed



Metrorail

4:30PM

3 Killed
25 Injuries





Communication Problems

Woodrow Wilson Bridge

I-95

November 4, 1998

- **190,000 Vehicles per day**
- **D.C., Maryland, and Virginia have parts of the bridge**
- **Major route for the east coast of the U.S.**





Communication Problems

November 4, 1998-1:07PM

- **Jumper on the Woodrow Wilson Bridge**
- **Bridge closed for eight hours**
- **Public safety agencies used runners to deliver messages**
- **No direct on-scene communications**

The incident that started CapWIN





September 11, 2001

- **Another example of interoperability**
- **U.S. Park Police Unit was communicating with Virginia Transportation unit using the CapWIN pilot program.**
- **Interoperability is not a new issue.**





The Solution

CapWIN
Capital Wireless Integrated Network



Building a Bridge in Transportation and Public Safety Communications

The graphic features three state flags displayed under a bridge-like structure. From left to right, the flags are Louisiana (blue field with a white circle containing a figure), Maryland (black and white checkered field with red and white cantons), and Delaware (white field with three red stars above two red horizontal stripes).



Should we depend on this?



- Antiquated
- Roundabout
- Confusing...





CapWIN is 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**





Organizational Structure

- **Interstate Compact**
- **Reciprocal legislation**
 - **Maryland, Virginia & District of Columbia**
- **Goes through Legislative & Executive approval processes in all three jurisdictions**
- **Submit to US Congress for approval**





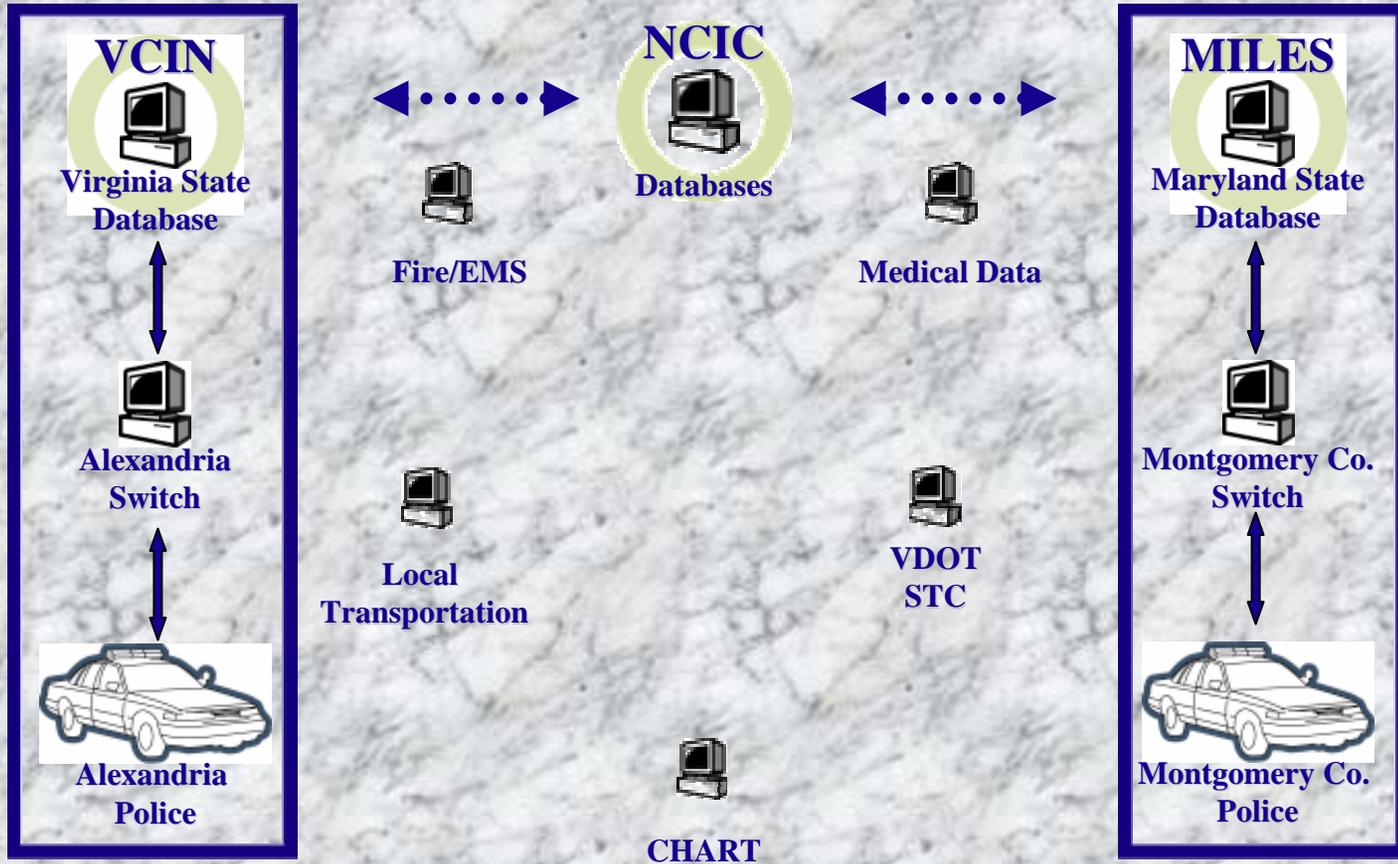
Long Term Governance

- **CapWIN Board has four members from each jurisdiction**
 - **Three local and one state representatives from Maryland and Virginia**
 - **Four members from the District of Columbia**
 - **Four members from federal agencies and organizations**
 - **One member at-large (User agencies not represented (i.e. Washington Transit))**



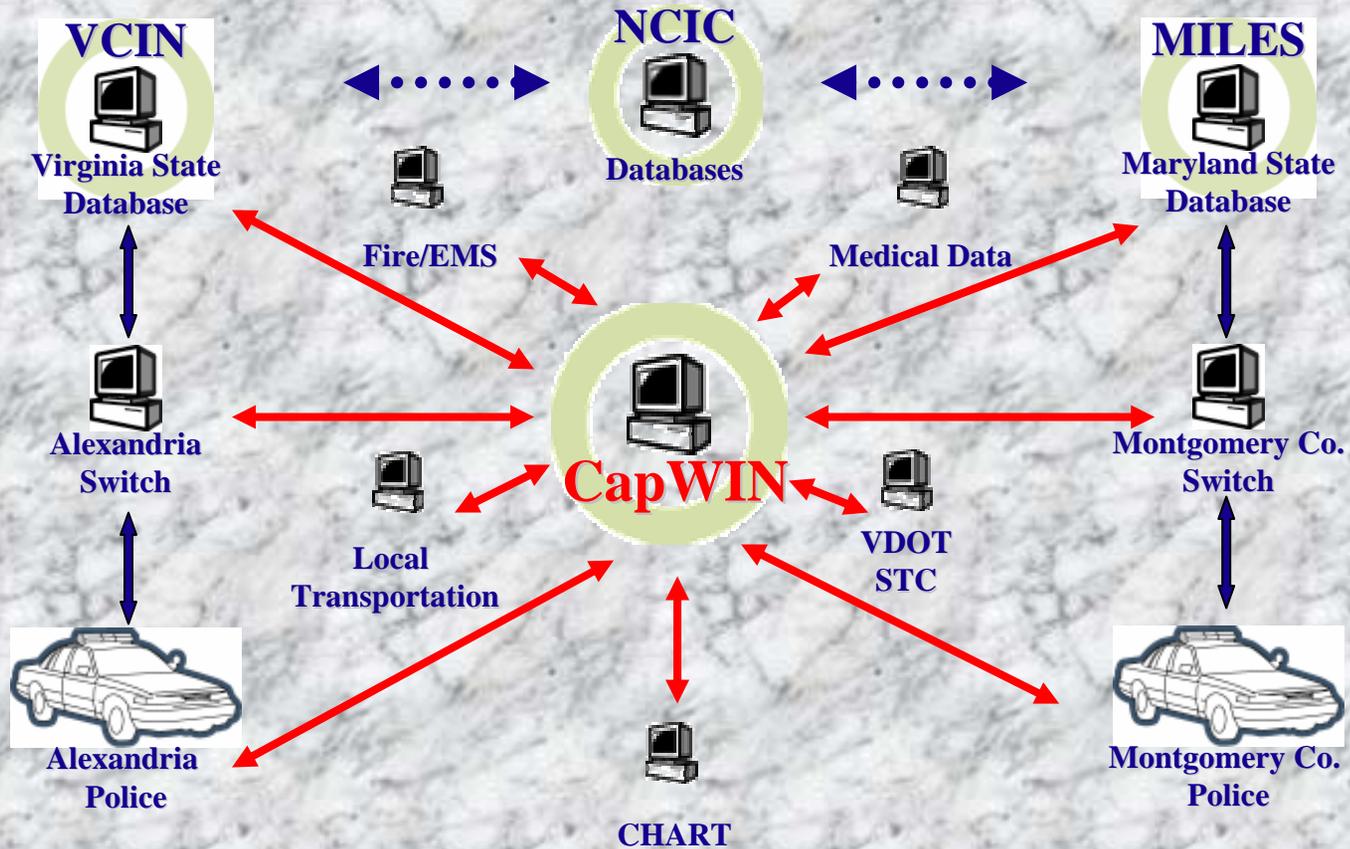


Without CapWIN





With CapWIN





Phase One Functionality

- **Law Enforcement Queries**
 - WALES, MILES, VCIN, NCIC, NLETS
- **Incident Management Support**
- **Messaging/Email**
- **Security**
- **Hazardous Materials**
- **Transportation Data Sources**
- **Automatic Notifications**
- **Search functions**
 - By agency/function
 - By area
 - By special skills





Law Enforcement Queries

- **Name** WALES, MILES, VCIN, NCIC, NLETS
- **Registration**
- **License**
- **Hotfiles**
 - **Local Warrants**
 - **Protection Orders**
 - **Concealed Weapons Permits**
 - **Future Files**





Query Name

CAPWIN		Night	Profile	Logout
Query License	Submit	Clear	? ✉ ➔	
Query Registration	Required information (*)			
Query Name				
Results	*First Name: <input type="text"/>			
Incidents	Middle Name: <input type="text"/>			
Create an Incident	*Last Name: <input type="text"/>			
My Contacts	*Date of Birth: <input type="text"/> <input type="text"/> <input type="text"/>			
My Notifications	Sex: <input type="text" value="SELECT"/>			
User Directory	Race: <input type="text" value="SELECT"/>			
Chat Rooms	State: <input type="text" value="SELECT"/>			
Email				
	Submit	Clear		





Query Results

CAPWIN		Night	Profile	Logout
Query License	Summary Results			? ✉ ➔
Query Registration	All warrants must be verified with the originating agency.			
Query Name	1 Query Registration: MG6438, DC			
Results	VIN: 7G4RF72M4KR732981 Make: Chevrolet Type: 2-Door Registered To: James Sexton	Source: WALES Year: 1993 Model: Cavalier Registration Status: Expired	Details	
Incidents				
Create an Incident				
My Contacts				
My Notifications				
User Directory				
Chat Rooms				
Email				
	2 Query License: 972436743, VA			W Details
	Name: Cynthia Marshall Height: 5'4" Hair Color: Red Sex: F Flags: None	Source: VCIN Weight: 127 Eye Color: Green	Details	
	3 Query Name: Philip J Larson			Details
	Flag: None			Details





Detailed Results

CAPWIN		Night	Profile	Logout
Query License	Detailed Results: Query 1			? ✉ →
Query Registration	All warrants must be verified with the originating agency.			
Query Name	Warrant:			
Results	<i>Warrant Issued:</i> 11/27/2002		<i>Source:</i> WALES	
Incidents	<i>Case Number:</i> 793648		<i>Offense:</i> DUI	
Create an Incident	<i>Originating Agency:</i> DC District Court 3			
My Contacts	<i>Miscellaneous:</i> Failed to appear for hearing, license suspended.			
My Notifications	<i>Subject:</i> James R. Sexton		<i>Weight:</i> 170	
User Directory	<i>Height:</i> 5'7"		<i>Eye Color:</i> Grey	
Chat Rooms	<i>Hair Color:</i> Black		<i>Race:</i> White	
Email	<i>DOB:</i> 07/12/1968		<i>Sex:</i> M	
	<i>SSN:</i> 969-47-6238		<i>Distinguishing Marks:</i> None	
	<i>Alias:</i> James Sexton			
	<i>Alias:</i> Jim Sexton			





Messaging/Email

- Incidents
- User Directory
- My Contacts
- Groups
- Units
- Instant Messaging
- Chat Rooms
- Email
- Attachments
 - Document
 - Photo
 - Floor plans
 - Other





Incident Management Support

- **Incident Name**
- **Location**
- **Incident Types and Sub Types**
- **Incident Description**
- **Messaging**
- **Chat Rooms**
- **File Sharing**





Incidents

CapWIN Capital Wireless Integrated Network		Night	Profile	Logout
Query License	<h2>Incidents</h2> <p>Refresh Rate: ? ✉ →</p> <p>90 Seconds <input type="text"/></p> <p>+DC (6)</p> <p>-VA (7)</p> <p>-Alexandria (2)</p> <p>+Spill 495 outer (Detail Join Email)</p> <p>+Car fire 210 SB (Detail Join Email)</p> <p>+Arlington County (1)</p> <p>+Fairfax County (1)</p> <p>+Loudoun County (1)</p> <p>+Prince William County (1)</p> <p>+Stafford County (1)</p> <p>+MD (7)</p>			
Query Registration				
Query Name				
Results				
Incidents				
Create an Incident				
My Contacts				
My Notifications				
User Directory				
Chat Rooms				
Chat Room List				
Create Room				
Email				





- Query License
- Query Registration
- Query Name
- Results
- Incidents**
- Create an Incident
- My Contacts
- My Notifications
- User Directory
- Chat Rooms
- Email

Incidents



Show inactive users Unit View User View

- + DC (9)
 - MD (6)
 - Montgomery County (5)
 - PIC - Amer Lgn Br
 - ([Detail](#) | [Leave](#) | [Email](#) | [Create Room](#) | [Delete Incident](#))
 - + Main Room (14) ([Open](#) | [Email](#))
 - + Traffic Room (7) ([Open](#) | [Email](#))
 - + Incident Participant List (14 | 0)
 - AMB108/MCFRS (2)
 - bwinfield/MCFRS ([Email](#) | [IM](#))
 - galler/MCFRS ([Email](#) | [IM](#))
 - CHTU9301/MDSHA (1)
 - dwells/MDSHA ([Email](#) | [IM](#))
 - CHTU9306/MDSHA (1)
 - mwarns/MDSHA ([Email](#) | [IM](#))
 - Cruiser 7/MSP (1)
 - rstevenson/MSP ([Email](#) | [IM](#))
 - ENG102/MCFRS (1)
 - jsmith/MCFRS ([Email](#) | [IM](#))
 - RS510/MCFRS (1)
 - wcfield/MCFRS ([Email](#) | [IM](#))
 - SOC/MDSHA (1)
 - cbarns/MDSHA ([Email](#) | [IM](#))
 - SSP9906/VDOT (1)
 - hwood/VDOT ([Email](#) | [IM](#))
 - SSP9924/VDOT (1)
 - kmark/VDOT ([Email](#) | [IM](#))
 - STC/VDOT (1)
 - ecarter/VDOT ([Email](#) | [IM](#))
 - TOC3/MDSHA (1)
 - sjones/MDSHA ([Email](#) | [IM](#))
 - fcrugg/USPP ([Email](#) | [IM](#))
 - hwilliams/VSP ([Email](#) | [IM](#))
- + Lane Closure - Amer Legion Br
 - ([Detail](#) | [Join](#) | [Email](#) | [Create Room](#))
- + Personal Injury Collision (PIC) - Mass Ave & Western Ave
 - ([Detail](#) | [Join](#) | [Email](#) | [Create Room](#))
- + Vehicle Fire - Rte. 29
 - ([Detail](#) | [Join](#) | [Email](#) | [Create Room](#))
- + Possible Drowning - 1201 Maple Ave.
 - ([Detail](#) | [Join](#) | [Email](#) | [Create Room](#))
- + Prince George's County (1)
- + VA (5)





User Profile

CAPWIN

Night
Profile
Logout

Query License

Query Registration

Query Name

Results

Incidents

Create an Incident

My Contacts

My Notifications

User Directory

Chat Rooms

Email

User Profile

?
✉
➔

[Email](#)
[IM](#)
[Add to Contacts](#)
[User Directory](#)

Name:	Roger Stevenson
User ID:	rstevenson
Primary Contact #::	123-323-1234
Current Affiliation:	Maryland State Police / MSP
Current Location:	Montgomery County
Current Unit:	Cruiser 7
Agency Affiliation:	Maryland State Police
Agency Short Name:	MSP
Agency Contact #::	123-623-35264
Groups:	Aviation
Skills:	Flight Medic





User Directory

CAPWIN
Night
Profile
Logout

- Query License
- Query Registration
- Query Name
- Results
- Incidents
- Create an Incident
- My Contacts
- My Notifications
- User Directory
- Chat Rooms
- Email

User Directory

?
✉
➔

Sort by: Location | [Discipline](#)

- + DC
- MD
 - Montgomery County
 - Fire
 - + Montgomery Co Fire and Rescue Service / MCFRS
([Email](#))
 - + Truck 43 ([Email](#))
 - HazMat ([Email](#))
 - bwinfield ([Email](#) | [IM](#))
 - galler ([Email](#) | [IM](#))
 - wcfield ([Email](#) | [IM](#))
 - jsmith ([Email](#) | [IM](#))
 - + Group 2 ([Email](#))
 - + Police
 - + Transportation
 - + Prince George's County

- + VA





Transportation

These functions are designed and will be coming in the first quarter.

- **Weather Sensors**
- **Traffic Cameras**
- **Roadway Sensors**
- **Traffic incident information**
- **Transportation Resources**





Hazardous Materials Queries

- **Chemical Name**
- **Placard**
- **CAS #**
- **CHRIS Code**
- **DOT Label**
- **UN/NA #**
- **Limited number of train cars and trucks through major database**





CHEMTREC

- **Notification**
- **Email/Chat**
- **CHEMTREC Form**
 - **Attach Form Containing all Required Information Necessary for CHEMTREC to Initiate Action**
 - **Automated completion of form based on HAZMAT query results**





www.CapWIN.org

CapWIN - The Capital Wireless Integrated Network - Homepage - Microsoft Internet Explorer

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Address <http://www.capwin.org/> Go Links

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CapWIN System Integrator contract
awarded to the IBM Corporation...

CAPWIN

Capital Wireless Integrated Network

Building a Bridge in Transportation and Public Safety Communications

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Related Links:

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5 Hierarchical Menu Trees Created

start | Internet

Inbox - Microsoft Ou... | CapWIN - NIST Pres... | CapWIN - The Capit... | 11:14 AM





Statue of Liberty



- **E Smart**
- **Coast Guard Initiative**





Technology

- **More information = better decisions**
- **Force multiplier**





Critical Factors

- **Logistics**
- **Environmental**
- **Historic**
- **Aesthetic**
- **Architecture**
- **Future Proofing**
- **Awareness**





Legacy Systems

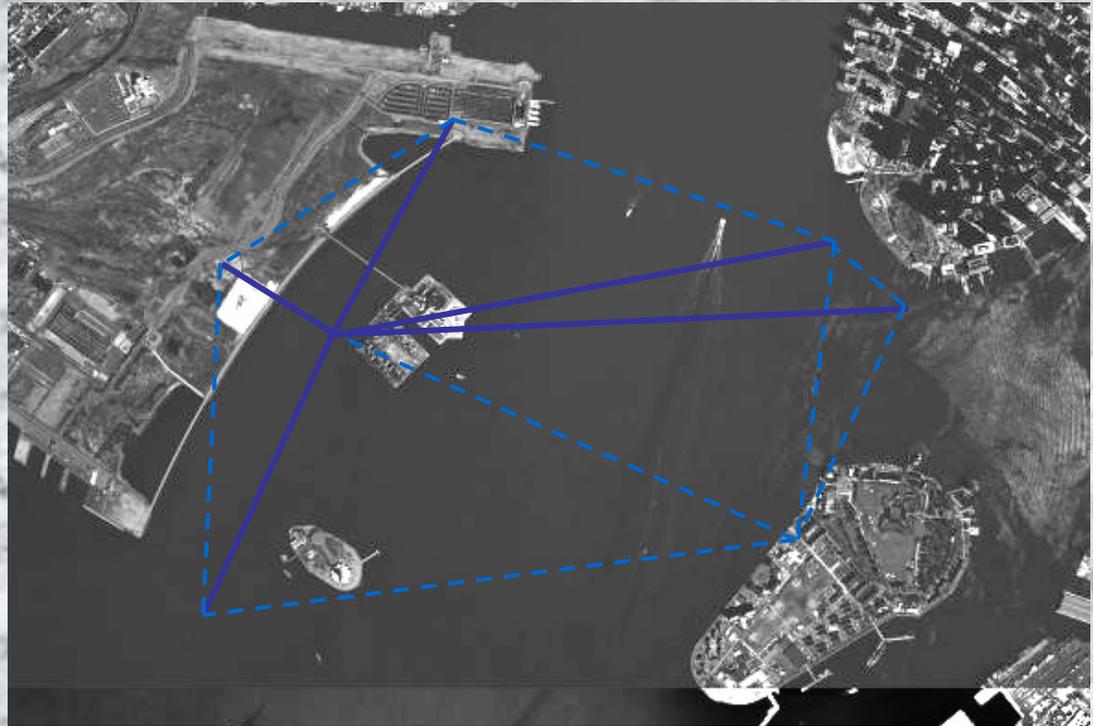
- **CCTV**
- **Building Automation (Fire, HVAC)**
- **Public Address System**
- **Dictaphone (Radio/Phone)**
- **X-Ray Machines**
- **Metal Detectors**





Scope of the E-Smart System

- **Local Area Network at Each Site**
- **Communications Links from each site to Command Center**
- **Distributed Control**
- **Common Command and Control**





U.S. Coast Guard

- Harbor security
- VTS
- Technology Integration
- Responsibilities
 - Day-to-day
 - RNC
 - Olympics





Solutions

- **Federal Wireless Interoperability Project**
- **USPP/NPS/DOI Trunked Radio Project**

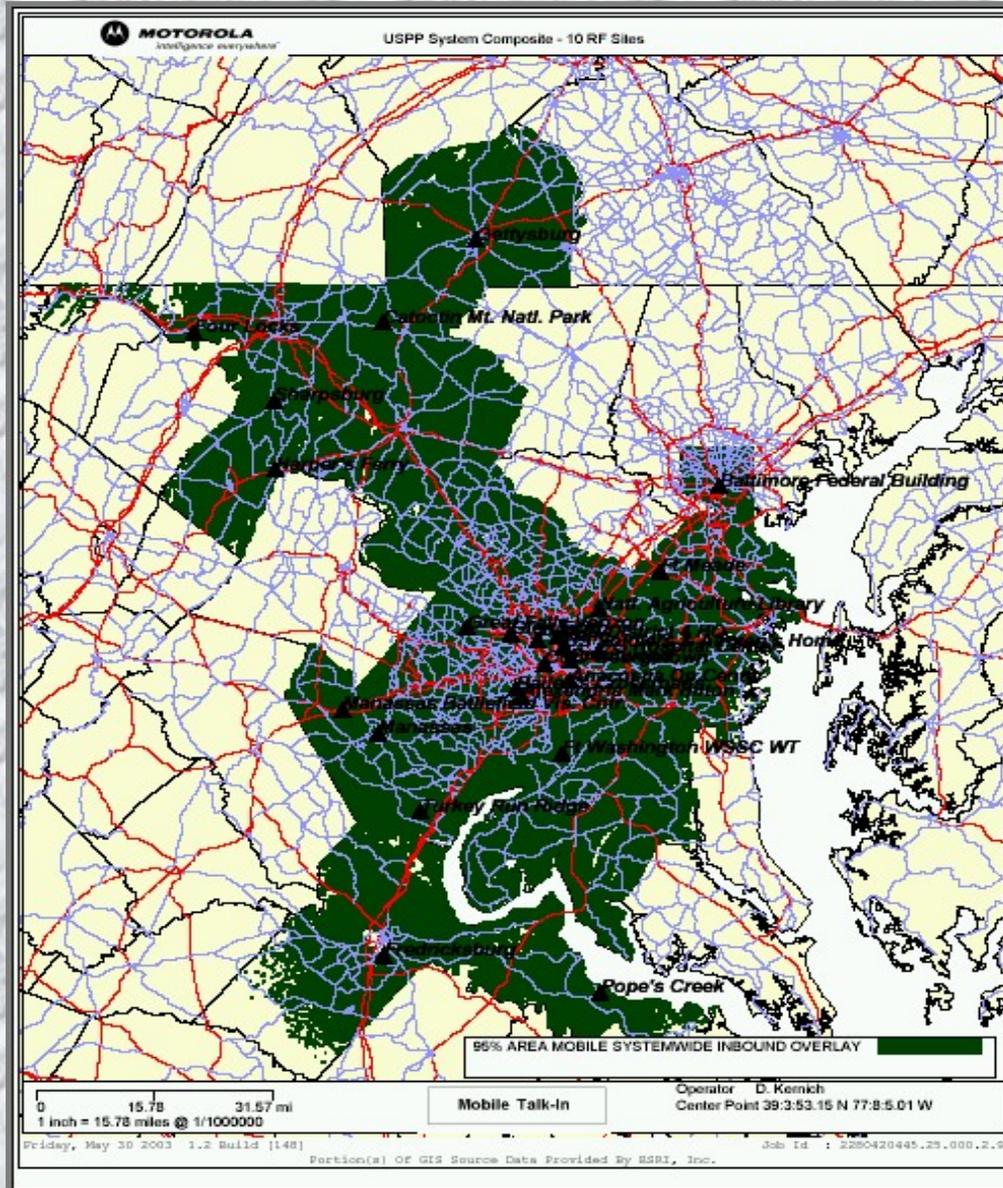


COMPTON





COVERAGE – WASHINGTON DC





The Challenges

- **Tradition vs. progression**
- **Past history**
- **Unrealistic expectations**
- **Lack of knowledge/lack of expertise**
- **Show me the money**





Lessons Learned

- **Don't be afraid to ask**
- **Put aside history**
- **Challenge assumptions**
- **Have a champion**
- **Use your experts**
- **Include all stakeholders**
- **Have a project plan/project manager**





Lessons Learned

- Funding comes easier with partnerships
- Communicate well and communicate often

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

CapWIN Connection

Volume 1, Issue 2 February 2003

Special points of interest:

- Call CapWIN at 301-403-4592
- Technical Questions? Call 301-403-4531
- Visit our Home Page at <http://www.capwin.org>
- CapWIN operations to relocate in March 2003

CapWIN Executive Board Recognizes Communications Need

*Chief Charles Samarra
Alexandria PD*



Chief Samarra

Our community suffered an horrific assault almost eighteen months ago resulting in massive damage and the loss of innocent lives. In the Washington Metropolitan Region - Maryland, Virginia, and the District of Columbia over one hundred fire, transportation, police, and emergency medical services agencies respond to public safety emergencies using their

ing citizen safety. The need for a communications bridge, such as CapWIN, has never been greater in our region. It has been said that, "No man, woman,

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Lessons Learned

**Remain
passionate
Never forget
why**





Conclusion



**By working together
we ensure that our
resources and our
national treasures
and icons will
remain available and
accessible for future
generations and
keep safe those who
diligently serve our
public**





It Must NEVER Happen Again



The future is yours to shape

