


Maryland

Statewide Communication Interoperability Plan (SCIP) Implementation Report

July 2009

Homeland Security

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Successes and Challenges

State evaluation of successes and challenges

OEC is required to report to Congress on progress on SCIP implementation and would like to highlight success stories and remaining challenges. In the table below, please highlight three to five SCIP Implementation success stories since your SCIP was approved in April 2008. In addition, please identify two to three challenges. Use as much space as needed to identify and describe the successes and challenges.

Please note that the information you submit on your successes and challenges will be made publicly available, unless this information is sensitive. If you wish to report on progress and/or challenges, but such information might be sensitive, please advise us so that we can consult with you on how it could be redacted from the public. Be advised that only the information contained in this table will be subject to being made available to the public.

Successes (3-5): Identify the success and describe why it is significant or important to overall statewide interoperability efforts.

1. Governor O'Malley's signature of an Executive Order creating the Maryland Statewide Communications Interoperability Program (MSCIP). The Governor's July 10, 2008 Executive Order formalized the statewide interoperability governance structures (i.e., the Statewide Interoperability Executive Committee and its Practitioner Steering Committee) and created a Program Management Office (PMO) to oversee the major projects of the interoperability program. This strengthened leadership and provided a framework for program support, as well as signaling to state and local stakeholders and elected officials that communications interoperability is a top priority for Maryland.

2. Issuance of a Request for Proposals (RFP) for a statewide 700 MHz communications system. The completion of the RFP represented a full year of collaborative efforts on the part of a number of state agencies, multiple counties, and a consultant. Evaluation of the proposals received is ongoing, and an award is anticipated in the 1st Quarter of 2010. The statewide system procured will serve as a long-term communications solution for Maryland, providing State, local, and regional public safety first responders with interoperable voice and limited data services that support daily and emergency operations.

3. **Regional interoperability efforts, particularly in the Eastern, Northern, and National Capital regions.** The counties of the Eastern Shore created the Maryland Eastern Shore Interoperability Network (MESIN), which utilizes National Public Safety Planning Advisory Committee (NPSPAC) mutual aid frequencies, and have begun the process of establishing a formal governance structure for the region. The development of MESIN continues with equipment installation at additional sites to enhance 800 MHz, very high frequency (VHF), ultra high frequency (UHF), and mutual aid coverage.

Regional interoperability is also moving forward in the central part of the state. The National Capital Region (NCR) and The Baltimore Urban Area Working Group (BUAWG), both Department of Homeland Security (DHS) regional Urban Area Security Initiative (UASI) Grant Recipients, and have established Tactical Interoperable Communications Plans (TICPs). The gaps identified in the TICPs have been the focus of the BUAWG's wireless and wireline communication subcommittees for the past 18 months. The wireless subcommittee, Central Maryland Area Radio Communications (CMARC), is currently moving into Phase III implementation. The Wireline Committee (fiber) has conducted a survey, funded by the BUAWG, of the fiber located in the region; this survey has provided the blueprint for the last mile connection plan for jurisdictions in the NCR and the BUAWG (known as the One Maryland Broadband Plan).

Additionally, the counties of Western Maryland are working together to develop a regional network known as the Washington Allegany Garrett Interoperability Network (WAGIN). WAGIN will employ Internet Protocol Interoperability and Collaboration System (IPICS) technology to bridge existing communications systems. It is anticipated that this system will be operable by Spring 2010.

Regional partnerships will continue to pay dividends as Maryland looks to formalize its regional governance structures and develop TICPs for the remaining three regions in the coming months.

4. Continued partnerships between State agencies and local jurisdictions. Each incarnation of statewide interoperability governance over the years has been comprised of both State and local representatives. Through this partnership Maryland was able to achieve coordinated efforts between local governments and state-level leadership, agreeing upon nineteen State and local Public Safety Interoperable Communications (PSIC) grant projects. Since that time, State agencies and local jurisdictions have continued to work together, reaching agreements to facilitate the execution of these projects. Agreements take a variety of forms and may involve the co-location of equipment on towers, for instance, or the State's assumption of the responsibility of constructing infrastructure in a local jurisdiction with that jurisdiction's PSIC funds. These sorts of partnerships reduce costs, help to ensure that the emergency communications needs of all parties are addressed, and pave the way for additional joint initiatives in the future.

Challenges (2-3): Identify the challenge and describe how it has/will make SCIP implementation difficult.

1. Identifying funding in an unfavorable economic climate. Both State and local agencies are facing shrinking budgets, and the interoperability program must compete with other important initiatives for funding. Multi-jurisdictional partnerships to reduce costs and the careful allocation of federal dollars have ameliorated the problem somewhat, but funding remains an issue. This affects every aspect of SCIP implementation, from management to equipment to infrastructure.

2. Ensuring compliance with the National Telecommunications and Information Administration (NTIA) environmental requirements for the PSIC program. The Programmatic Environmental Assessment (PEA) for PSIC was issued more than sixteen months into the thirty-six month grant period, and the additional time required to ensure compliance with new environmental guidelines and procedures is cause for concern given the September 2010 expiration of PSIC funds. PSIC-funded towers and fiber infrastructure are at the greatest risk of facing significant delays; if these projects cannot be completed prior to the expiration of funds, State and local agencies will not qualify for reimbursement. This jeopardizes the completion of critical infrastructure projects that were carefully selected to benefit statewide interoperability.

State Overview

Overview of the State and its interoperability challenges

Maryland is a densely populated, but geographically small, State located in the center of the Atlantic Seaboard. Maryland's total area is 12,407 square miles, but with a population of more than 5 million residents it is the 19th most populous State in the Nation. The State is approximately 250 miles long and 90 miles wide. A large portion of the square mileage in Maryland is covered by water. Maryland is

bordered on the north by Pennsylvania, the south and west by West Virginia and Virginia, the north and east by Delaware, and the south by Washington, DC. Maryland is also bordered by the Atlantic Ocean and the Chesapeake Bay. Maryland's largest city is Baltimore. A significant number of the State's largest communities are in the surrounding suburban areas of Washington, DC.

For most of Maryland, the units of local government are county governments. Twenty-three counties and Baltimore City make up the twenty-four main local jurisdictions found in Maryland. Baltimore City, although a municipality, has been considered on par with county jurisdictions since the adoption of the Maryland Constitution in 1851. Maryland does not have any federally recognized tribal nations.

Maryland's most significant risk of natural disaster is the landfall of a hurricane on its shores. The risk of harm from storms and flooding is significant because of the dense population in areas where storms are likely to occur. It is anticipated that Maryland's population density will increase in the coming years due to an expected influx of 28,000 households from the Base Realignment and Closure (BRAC) program.

For its size and population, Maryland also bears significant risk exposure from acts of terrorism. Maryland is home to critical facilities and assets that are potential terrorist targets. The Port of Baltimore is one of the ten busiest ports in the Nation; furthermore, Maryland contains one of the busiest flight paths in the world, with three major international airports located within or adjacent to Maryland's borders. Interstate-95, the main north-south highway on the East Coast, cuts through the State. Maryland is also home to many key Federal agencies including the National Institute of Health, the Food and Drug Administration, the National Aeronautics Space Administration, the Social Security Administration, a Federal Reserve branch, and the National Security Agency. Additionally, the State contains key facilities such as nuclear power facilities, a liquid natural gas terminal, numerous hospital and shock-trauma centers, public and private universities (including the United States Naval Academy), national parks, a passenger cruise terminal, mass transit for both Baltimore and the DC Metropolitan area, and rail assets relating to passenger, freight, and food transport. The State is also home to a number of tourist venues in Baltimore, Annapolis, and Ocean City.

Maryland employs a network approach for interoperability solutions. Every part of the State can communicate through gateways; however, only certain portions of the State have shared channels or proprietary shared systems. Long-term voice interoperability solutions involve the implementation of a statewide 700 megahertz (MHz) radio system, which is currently being procured. This system will be a standards-based, shared system that will provide seamless operations statewide and the ability to connect with other regional and local systems. This system will build on past and current infrastructure and will require Project 25 (P25) compliance statewide. Data communications standards in Maryland are based on the use of proprietary shared systems with relatively open architectures such as Web Emergency Operations Center (WebEOC), Capital Wireless Information Net (CapWIN), and Emergency Management Mapping Application (EMMA).

The statewide capabilities assessment survey results identified the following challenges to interoperability: funding limitations, systems with limited interoperability capabilities, aging systems in need of replacement, insufficient availability of frequencies, system coverage limitations, underutilization of mutual aid channels, lack of a statewide common frequency band, limited use of wireless data systems, and the requirement for a robust statewide infrastructure.

Vision and Mission

Overview of the interoperable communications vision and mission of the State

The Maryland Statewide Communication Interoperability Plan (SCIP) has a timeframe of **six years (December 2007 – December 2013)**, with annual scheduled updates.

Vision: Achievement of a statewide system that will support communications interoperability and will facilitate real-time communications across boundaries of agencies, jurisdictions, levels of government, and ultimately, across State boundaries with Maryland's neighbors. Interoperable communications will ensure that Maryland's public safety providers can coordinate with one another, share information, and provide a consolidated response.

Mission: In the short-term, to develop and implement a reasonable and feasible solution framework that provides statewide, secure, coordinated, real-time voice and data communications that can span jurisdictional and organization boundaries. In the long-term, to establish a statewide public safety communications system that will be a standards-based open architecture that will address the needs of all stakeholders from the enterprise level.

Urban Areas

Overview of the Urban Areas in the State and the extent to which they are mentioned in the SCIP

Maryland has one Urban Area Security Initiative (UASI), the Baltimore Urban Area, and has a significant portion of a second UASI—the National Capital Region (NCR). The Baltimore Urban Area includes Baltimore City; City of Annapolis; and the Counties of Baltimore, Anne Arundel, Carroll, Harford, and Howard. The NCR consists of 6,000 square miles including Washington, DC, northern Virginia, and Maryland's Prince George's and Montgomery Counties.

A Tactical Interoperable Communications Plan (TICP) for the Baltimore Urban Area was prepared and validated with a full-scale exercise. The Maryland SCIP provides points of contact for both the Baltimore and NCR TICPs and cites the receipt of TICP Scorecards for both plans. There are two governance groups in Maryland with oversight of the State's interoperability strategy and needs: the Statewide Interoperability Executive Committee (SIEC) and the Practitioner Steering Committee (PSC), which reports to the SIEC. SIEC and PSC membership includes high-level public safety representatives statewide, including both the Baltimore and NCR urban areas.

Addressed in the Maryland SCIP are the TICP governance recommendations regarding roles, responsibilities, and relationships; memoranda of understanding (MOUs) and review processes; and long-term funding strategies.

Standard operating procedure (SOP) recommendations are also specifically addressed in the SCIP; recommendations call for the creation of Regional Interoperability Committees (RICs) that will "*create an organized process for synchronizing the existing local and regional communications strategies to identify longer-term interoperability goals across multiple jurisdictions and levels of government.*" Governor O'Malley's July 10, 2008 Executive Order, which formalizes the interoperability governance structure in Maryland, also provides for regional interoperability bodies.

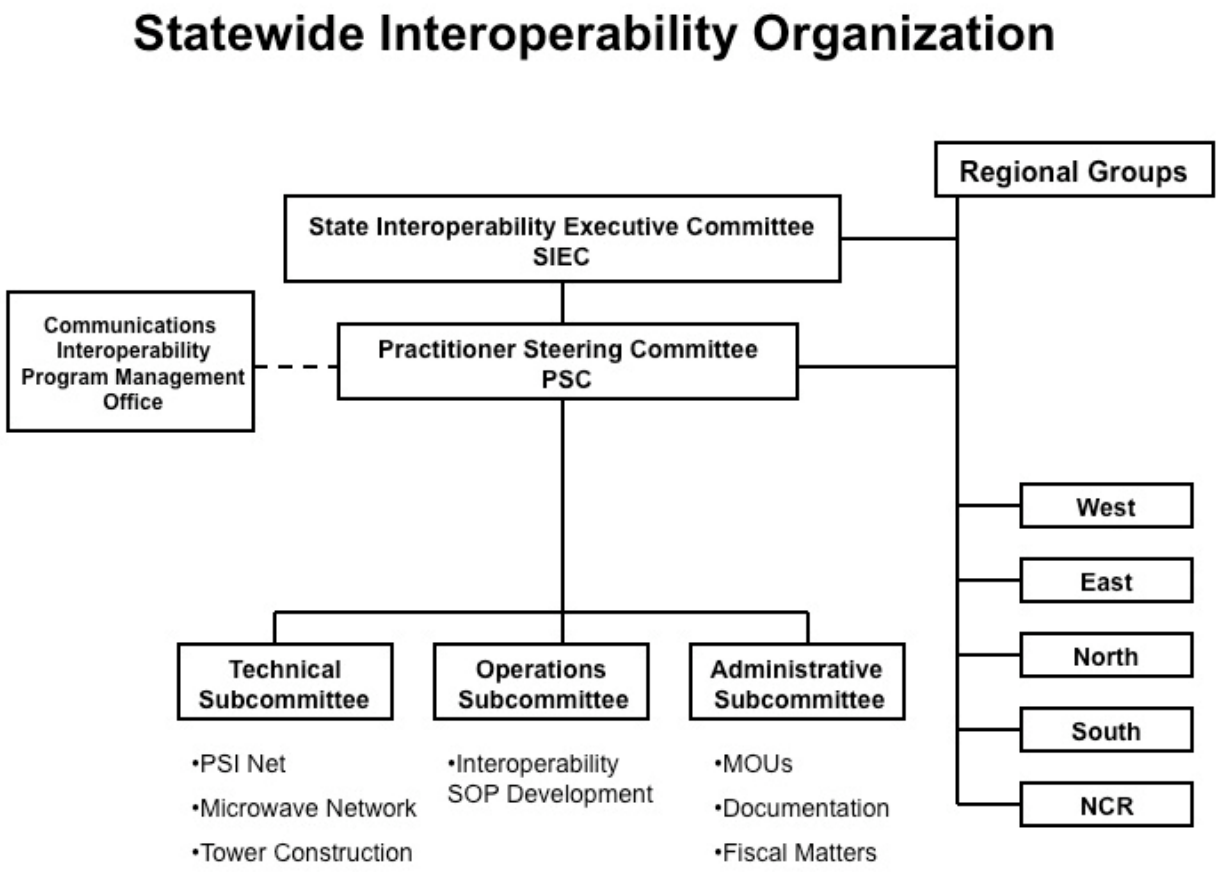
Additionally, subsequent to the receipt of the TICP Scorecard recommendations, the Baltimore Urban Area initiated basic and advanced training and exercises on SOPs to ensure that all participating first responder agencies attain and maintain National Incident Management System (NIMS) and Incident Command System (ICS) compliance.

Finally, the SOP section of Maryland's SCIP addresses the usage recommendations, which call for the participation of Federal agencies and the inclusion of interoperable communications as an evaluation component for future exercises.

Governance

Overview of the governance structure and practitioner-driven approaches

Maryland established a governance structure that facilitates the development of a statewide, locally driven interoperability plan that meets the needs of public safety first responders. On July 10, 2008, Governor O'Malley signed an Executive Order formally establishing Maryland's Statewide Interoperability Executive Committee (SIEC), along with its Practitioner Steering Committee (PSC). Although Maryland has a long history of interoperability partnership, these governance bodies were not formalized until recently. The first meeting of the reconstituted SIEC and PSC was held on May 28, 2009.



The SIEC is comprised of senior elected and appointed officials from State, county, and municipal governments. The SIEC has the responsibility to provide policy-level advice regarding public safety communications interoperability, and to promote the efficient and effective use of resources for matters related to public safety communications and interoperability. It is anticipated that by the legislative session for 2011, the SIEC may achieve additional formal authority through legislation in addition to the authority derived from the Executive Order.

The PSC was established at the request of the Governor to provide recommendations and advice to the SIEC and the Governor's Office of Homeland Security (GOHS) on all matters pertaining to communications interoperability including assessment, acquisition, standardization, planning, management, use, and oversight of communications. The PSC is comprised of senior communications practitioners from all fields of public safety. These individuals represent State, county, and municipal governments, as well as non-governmental organizations. The PSC established the following three permanent subcommittees that provide the subject matter expertise required to implement public safety communications and interoperability projects: 1) Administrative and Budgetary Support Subcommittee, 2) Technical Subcommittee, and 3) Operations Subcommittee.

The PSC serves as a common ground for emergency communications practitioners throughout the State. The PSC is responsible for arranging and supporting meetings between State and local entities, as well as assisting in drafting a variety of MOUs to advance communications sharing and interoperability. These agreements provide for a range of practices, from exchanging codes to sharing frequencies in times of emergencies to sharing tower infrastructure.

Federal, State, local, and non-governmental organizations (NGOs) were offered an opportunity to participate in the development of the SCIP and participate in the future statewide 700 MHz public safety radio system. The Maryland SCIP includes strategies to further State, local, and non-State agency participation through statewide and regional planning and coordination activities.

Public safety NGOs are also involved in policy development and outreach efforts. NGOs include, but are not limited to, hospitals, volunteer fire companies, utilities, Radio Amateur Communications Emergency Services (RACES), the American Red Cross, passenger and freight railroad, port facilities, and mass-transit entities. They are involved through public meetings and exercises, Web-based information sharing, media and public awareness efforts, legislative outreach, and collaborative activities with partners and stakeholders. Additionally, the PSC Outreach Program will document their needs through workshops and regional interoperability executive committees.

The Governor selected Colonel Sheridan, the Superintendent of the Maryland State Police (MSP), and Andrew Lauland, the Director of GOHS, as the people responsible for supervising and championing the cause of interoperability throughout the State. Colonel Sheridan, in consultation with then Secretary John Porcari of the Maryland Department of Transportation (MDOT), named John Contestabile of the MDOT as the interoperability program director and primary point of contact for interoperability in Maryland. Mr. Contestabile recently retired from state government, and a new director will start August 3, 2009. In the interim, Kristen Skogsberg, who has been with the program since February 2009, will serve as the primary point of contact.

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Governance Initiatives

The following table outlines the strategic governance initiatives, gaps, owners, and milestone dates Maryland outlined in its SCIP to improve interoperable communications. Information on the status of these initiatives is also included.

Initiative	Gap	Owner	Milestone Date	Status (Complete, In Progress, Not Started)
Conduct a SCIP review to update the plan.	Need for six month review and further annual reviews.	SIEC/PSC	July 2008 Annually	6 month review complete
Finalize and release request for proposal for 700 MHz statewide radio system.	Need for RFP to begin procurement process.	DBM / DoIT	July 2008	Complete
Seek Executive Order establishing clear authority.	Need for executive support.	The Governor's Office	July 2008	Complete
Develop a MOU that can be utilized as a baseline with all stakeholders. Develop a MOU for sharing the 700 MHz system with local jurisdictions	Need for partnering.	PSC Technical Subcommittee	January 2009 Fall 2011	Complete for towers, system, fiber In Progress
Create a formal group charged with managing the technical architecture to increase efficiency and provide economies of scale.	Need to ensure consistency with SCIP high level architecture	PSC Technical Subcommittee	Interim (1 – 5 years)	Complete
Ratify formal charter for SIEC and PSC.	Need for updated charter to reflect revised SIEC/PSC membership.	SIEC/PSC	Winter 2009	In Progress
Refresh membership in the State interoperability governance structure.	Need for regional representatives and renewed SIEC/PSC.	MSP / PMO	Summer 2009	In Progress; regional representatives remain
Establish regional interoperability committees.	RICs needed for enhanced governance and SOPs.	SIEC / PSC	Fall 2009	In Progress
Establish an Interoperability Project Management Office (PMO) to manage statewide projects.	Statewide system implementation requires project management.	MSP	Summer 2009	In Progress
Institute SIEC/PSC grant review and recommendations for multiple funding sources.	Need for long term funding solutions.	SIEC, Governor's Office, SAA	Ongoing	In Progress; IECGP and PSIC programmed via SIEC

Initiative	Gap	Owner	Milestone Date	Status (Complete, In Progress, Not Started)
Propose State legislation to support the statewide interoperability governance structure and funding.	Governance bodies need both executive and legislative support.	PMO, SIEC, Legislative members	Spring 2011	In Progress
Staff Program Management Office with sufficient resources to manage major statewide projects (700MHz, CCTV, CAD/RMS).	Need for expert project management.	SIEC and PSC	Summer 2009	In Progress
Obtain funding for: ▪ Operations and maintenance of new statewide 700 MHz voice and data interoperable communications system ▪ Technology refreshment and replacement	Need to establish guidelines and standards to ensure consistent and appropriate maintenance of technical architecture. Need for capacity and upgrades.	PMO, SIEC, Governor's Office	Ongoing	In Progress; Initial funding secured
Establish a process for maintenance/update of communications assets/equipment.	Ensure adequate funding and procedures to maintain the new system	PMO	RFP evaluation underway. Award early 2010	In Progress
Follow up on AARs for communications objectives within exercises.	To ensure After Action Reports (AARs) are implemented to improve the system	PMO, MEMA	Ongoing	In Progress
Participate in multistate baseline assessment of interoperability capabilities	Need to identify opportunities for integration / linkage to improve communications regionally	PMO, All Hazards Consortium	Phase I to be complete Spring 2010	In Progress

Standard Operating Procedures

Overview of the shared interoperable communications-focused SOPs

Maryland has several regional sets of SOPs for communications, including the Central Maryland Area Radio Communication (CMARC) and Maryland Eastern Shore Interoperability Network (MESIN) systems. Maryland has SOPs that govern the use of the National Public Safety Planning Advisory Committee (NPSPAC) allocated 800 MHz channels, Mobile Command Post/Unit Mobilization, NCR Radio Cache Deployment, mutual aid channels, and Central Maryland Radio Tower "Sites on Wheels."

The objective of these SOPs is to achieve interoperability with all participating Federal, State, county, and local agencies, as well as volunteer fire and rescue and emergency medical services (EMS) agencies.

Mutual aid agreements with neighboring States are common in Maryland for specific events and incidents in many locales. For instance, agencies across the Eastern Shore of Maryland have mutual aid agreements with each other and with agencies in Delaware and Virginia. Maryland's counties in the NCR have mutual aid agreements with their counterparts in Washington, DC and Virginia, and counties in Western Maryland have mutual aid agreements with their public safety counterparts in Pennsylvania and West Virginia.

Additionally, the State of Maryland was instrumental in establishing the All Hazards Consortium (AHC), which is comprised of the nine Middle Atlantic States (Delaware, Maryland, New Jersey, New York, North Carolina, Pennsylvania, Virginia, Washington, DC, and West Virginia). The AHC has been very active in promoting and coordinating regional interoperability efforts (see www.ahcusa.org for more information).

In 2005, by Executive Order, Maryland established NIMS as the State standard for emergency management. The PSC Operations Subcommittee will develop operational guidance to assist in developing NIMS-compliant SOPs for statewide use. The next generation of federal interoperability grants (i.e., IECGP) will assist in developing the NIMS-compliant SOPs for statewide use.

SOP Initiatives

The following table outlines the SOP strategic initiatives, gaps, owners, and milestone dates Maryland outlined in its SCIP to improve interoperable communications. Information on the status of these initiatives is also included.

Initiative	Gap	Owner	Milestone Date	Status (Complete, In Progress, Not Started)
Conduct workshop in each region to establish TICPs. Establish statewide TICP based on regional TICPs.	Regional SOPs required statewide.	PSC, Regional Interoperability Committees	Fall 2009 January 2010	In Progress
Develop a standard statewide SOP template regarding the use of interoperability technology and when and how to utilize the assets. ▪ Ensure that statewide and regional SOPs follow and enhance NIMS protocols and procedures.	Flexible SOPs are required for effective statewide efforts. Ensure continued NIMS compliance.	PSC Operations Subcommittee, MEMA	February 2010	In Progress
Develop a library for the collection of TICPs/ SOPs that will serve as an online reference point for public safety personnel throughout the State. Library should be made available on website developed under Usage initiatives.	Easy access of SOPs from a statewide data platform is necessary.	MEMA	March 2010	Not Started
Develop standards for data storage/access (data dictionaries), interfaces (protocols and software platforms), and delivery methods (last mile technologies).	Need for information sharing.	Application specific	Ongoing	In Progress

Technology

Overview of the technology approaches, current capabilities, and planned systems

Nine State agency systems identified in the SCIP use conventional analog systems in very high frequency (VHF) low band, VHF high band, and ultra high frequency (UHF). Radio systems operated by local agencies throughout the State utilize frequency bands in VHF low band, VHF high band, UHF, and 800 MHz. System types include conventional, Motorola 800 MHz trunked, M/A-COM EDACS 800 MHz, and M/A-COM EDACS UHF systems. The majority of the counties in the central region of the State, including the City of Baltimore, utilize 800 MHz radio systems. Three counties in the far west end of the State and two counties in the far northeast corner of the State operate on UHF or VHF systems.

P25 is not currently mandated; however, the State's vision is to establish a common statewide open architecture standard for newly acquired communications equipment and systems. Some State and local agencies are voluntarily purchasing P25-compliant radios to use on their local and neighboring agency systems. The State's long-term strategy is to construct a statewide P25 700 MHz system for voice and modest data communications to be utilized by all disciplines in State and local government agencies. The current P25 system in operation at the Baltimore Washington International (BWI) Airport may eventually serve as the prime site for the proposed CMARC regional communications system.

Regional radio systems in the State are used for interoperability and mutual aid communications as opposed to day-to-day operations. The significant regional interoperability networks operating in Maryland include the NCR, MESIN, CMARC, and the Maryland Incident Management Interoperable Communications System (MIMICS). The Washington Allegany Garrett Interoperability Network, or WAGIN, is an IPICS (Internet Protocol Interoperability and Collaboration System) solution begun in Western Maryland. An initiative referred to as the TAC-Stack concept is also planned for deployment, which will bridge mutual aid channels on VHF, UHF, 800 MHz, and eventually 700 MHz.
All first responders in the NCR can communicate either directly or through patched communications and 800 MHz interoperability exists throughout the region. The Washington, DC tri-band radio system provides interoperability with the Washington Metropolitan Area Transit Authority (WMATA) and Federal agencies using UHF and VHF systems. Interoperability gateways are deployed throughout the region to connect disparate radio systems. The Police and Fire Mutual Aid Radio Systems (PMARS & FMARS) provide connectivity between the region's dispatch centers. The Washington Area Warning Alert System (WAWAS) was established to broadcast warnings and situational awareness on a 24/7 basis.

Several data systems and projects are in various stages. Mobile data systems are widely used in the metropolitan areas; however, lack of funding is the primary obstacle for more widespread utilization. Geographic Information System (GIS) mapping data systems include EMMA and the Maryland Emergency Geographical Information Network (MEGIN). Other data infrastructure projects that are nearing completion include Net.Work.Maryland and the Statewide Wireless Infrastructure project to support the envisioned statewide wireless public safety communications system.

Redundancy is a key component for future voice and data communications systems. A wide array of Strategic Technology Reserve (STR) resources is available and includes radio caches, transportable gateways, portable repeaters, equipment to support in-building or below-grade/tunnel communications, mobile radio frequency "Sites on Wheels," several mobile command vehicles, and caches of analog/digital/satellite telephones.

The following tables list the major systems in Maryland, including those systems used solely for interoperable communications, large regional systems specifically designed to provide interoperability solutions, and large wireless data networks.

State System Name	Description	Status
Maryland Incident Management Interoperable Communications System (MIMICS)	Sites throughout the State designed to provide connectivity between public safety systems using computer controlled ACU-1000 technology.	Existing. Twenty-one sites currently installed, funding requested to place TAC-Stack systems at each site.
TAC-Stack	Equipment placed at sites throughout the State configured for mutual aid channels on VHF, UHF, 800 MHz, and eventually 700 MHz. Designed to link mutual aid channels between different frequency bands transparent to users.	Planned. Funding requested to implement the system. Plans are to install at designated MIMICS, MESIN, and CMARC sites. Washington County pilot implemented and white paper produced.
Net.Work.Maryland	Standards-based data network infrastructure, consisting of a combination of State-owned fiber optic networking and leased circuits, which will ultimately interconnect health, business, education, government, and public access via a high-speed, standards-based network of networks.	In progress. Nearing completion.
Statewide Wireless Infrastructure	Placement of towers, shelters, generators, and a microwave system needed to implement the new 700 MHz statewide communications system.	In progress. Approximately 40% complete.

Regional System Name	Description	Status
National Capital Region (NCR)	Allows first responders in the NCR to communicate either directly or through patched communications. 800 MHz interoperability exists throughout the region. The DC tri-band radio system provides interoperability with WMATA and Federal agencies using UHF and VHF systems. Interoperability gateways are deployed to connect disparate radio systems. The police and fire mutual aid radio systems provide connectivity between the region's dispatch centers.	Existing. Substantially completed and operational.
Maryland Eastern Shore Interoperability Network (MESIN)	MESIN utilizes NPSPAC 800 MHz mutual aid channels combined with an Internet Protocol (IP)-based network consisting of gateways, routers, and a fully redundant switch. Users are automatically connected to legacy system users whenever the dispatch center activates the designated talk groups and provides capabilities for cross-band inter-system operation.	Existing. Substantially completed and operational.

Regional System Name	Description	Status
Central Maryland Area Regional Communications (CMARC) System	CMARC involves the deployment of the NPSPAC 800 MHz mutual aid calling and tactical channels throughout the region. MEMA serves as the control point and monitors the calling channel on a 24/7 basis.	Existing. Substantially completed and operational.
Washington Allegany Garrett Interoperability Network (WAGIN)	WAGIN will utilize Cisco IPICS technology to bridge existing communications systems.	In progress.

Technology Initiatives

The following table outlines the technology strategic initiatives, gaps, owners, and milestone dates Maryland outlined in its SCIP to improve interoperable communications. Information on the status of these initiatives is also included.

Initiative	Gap	Owner	Milestone Date	Status (Complete, In Progress, Not Started)
Complete detailed planning and engineering for a statewide public safety communications and interoperability architecture using the new 700 MHz frequencies.	Need to complete planning for 700 MHz statewide system.	DoIT, RFP Development Committee	May 2008	Complete
Conduct a detailed coverage study and assessment to assure the optimum placement of towers to ensure statewide coverage and quality of service for the planned implementation of the 700 MHz system.	Need for capacity.	State	Interim (1 – 5 years)	Complete
Identify and define the public safety communications user population.	Need for a database for public safety assets.	State	Short-term (0 – 1 year)	Complete
Inventory assets in a database that is fully accessible by appropriate agencies via a universal and commonly accessible method such as a secure intranet or internet portal. Develop and implement process to keep information up-to-date.	Need for a database for public safety assets.	PSC Technical, State, Regional, Local	September 2010	In Progress
Complete engineering plans for MIMICS to determine capacity, coverage, technical feasibility, and integration requirements.	Need for advanced interconnect systems.	MSP, State	March 2011	In Progress

Initiative	Gap	Owner	Milestone Date	Status (Complete, In Progress, Not Started)
Develop phased program for TAC-Stack development for local and regional deployment. Develop a mobile TAC-Stack capability for incident response. Expand the 800 MHz mutual aid channels into all regions. Construct TAC-Stack interconnected mutual aid channel sites on VHF, UHF, 800 MHz, and eventually 700 MHz throughout the State. Support the establishment of regional and local mutual aid channel deployment.	Need for gateways to facilitate inter-system communications. Lack of resources to provide wide area coverage on mutual aid channels on all public safety frequency bands.	State, PSL, Regional, Local PSC PSC, DNR, Regional, Local DoIT, MSP, PSC PSC, Regional, Local	November 2009 July 2010 February 2013 Phased Approach. Baltimore Region 2010/2011, subsequent phases subject to funding availability	In Progress (See RFP)
Deploy messaging capabilities and Incident Management applications to facilitate collaboration at EOCs using applications such as WebEOC and EMMA.	Need for information sharing.	State, MEMA	Ongoing with training and exercises	In Progress
Ensure that backbone infrastructure planning will support future 700MHz system.	Need for capacity.	PSC Technical Subcommittee, PSC	June 2010	In Progress
Complete the large-scale rollout of mobile data access to public safety personnel. Support the effort to place MDTs in first responder units. Continued effort to place MDT utilization in first responder units and encourage interoperability between all agencies.	Need for information sharing.	State	Interim (1 – 5 years) January 2011	In Progress
Create a network of regional MIMICS, MESIN, and CMARC interoperability systems. Expand CMARC to form regional multi-agency communications system.	Lack of a statewide multi-band mutual aid channel infrastructure. Lack of a P25 shared, trunked, simulcast communications system across the region.	State, Baltimore Urban Area Work Group (BUAWG), WAGIN, Southern Region, NCR	September 2010	In Progress
Construct Phase I of a statewide 700 MHz voice and data interoperable communications system. Complete initial buildout of system.	Lack of statewide standards-based shared system for voice and data interoperable communications.	State, SIEC, PSC, DoIT	2011 2015	In Progress (See RFP)

Initiative	Gap	Owner	Milestone Date	Status (Complete, In Progress, Not Started)
Continue to construct statewide wireless infrastructure in anticipation of statewide 700 MHz voice and data communications system.	Lack of sufficient infrastructure configured to support new Statewide 700 MHz communications system.	PSC Technical Subcommittee	Interim (3 – 5 years)	In Progress
Complete the Western Maryland Interoperability Project (WAGIN).	Limited communications capability, interoperability, and technological options in the region	WAGIN Steering Committee	Spring 2010	In Progress
Procure and construct a CAD/RMS system for State agencies with interoperable linkage to local agencies.	Lack of adequate CAD system for all of the state policing agencies	CAD Steering Committee DoIT (for procurement)	April 2010 (dependent on contractors' availability)	In Progress
Expand HC Standard, the statewide health and medical data platform for alerting, system status monitoring (EMS, hospitals), and patient tracking.	Lack of complete coverage of appropriate health care providers / institutions with the existing deployment	MIEMSS	Winter 2009	In Progress
Video integration project	Lack of interoperability amongst surveillance systems and jurisdictions / agencies	PMO, MDOT	September 2009	In Progress
Complete data connectivity (PSINET) to all 9-1-1 centers, hospitals, local health departments.	Lack of complete coverage of appropriate health care providers / institutions and 9-1-1 centers with the existing deployment	SIEC, MIEMSS	September 2010	In Progress

Training and Exercises

Overview of the diversity, frequency, and inter-agency coordination of training and exercises

Maryland is developing interoperability-focused training and exercise plans that will be joined with the State's broader emergency response training and exercise program. It will build on resources, tools, and programs that already exist. These current capabilities include the Maryland Exercise and Training Integration Committee (MD ETIC), the annual Training and Exercise Planning Workshops and

subsequent Three Year Exercise and Training Plan, current capability-based planning initiatives, the Homeland Security Exercise and Evaluation Program (HSEEP) to include the Corrective Action Program, and current programs to train and exercise components of the Statewide Communications System.

Maryland's training and exercise program is NIMS-compliant. MD ETIC is a statewide governance group that ensures statewide NIMS compliance and builds and supports the self-sustaining statewide exercise and training program that strengthens Maryland's all-hazards preparedness capabilities as defined by the National Preparedness Goal. The MD ETIC focuses on implementing activities and initiatives to ensure integrated and effective exercise and training-related activities throughout the State. The committee also helps coordinate exercise evaluation and training-related activities and provides outreach to jurisdictions and agencies to ensure support and participation. The MD ETIC will be used to provide guidance and coordination for all interoperability training and exercises. It will also assist in the coordination of training and exercise activities.

Maryland uses a comprehensive capabilities-based training and exercise planning process. This three-year training and exercise plan incorporates the needs identified by State and local stakeholders. Documented needs are based on recent investments such as equipment, plan revisions, and training as well as after action reports and improvement plans. Workshops are conducted in every region and for Federal and State partners. These workshops foster regional-based exercises that evaluate capabilities such as interoperable communications. A statewide workshop is held annually to discuss and approve the draft three-year plan.

Training

Emergency response professionals in Maryland receive a combination of classroom and on-the-job training for the component systems and equipment they use. Training is offered regularly, provided upon hiring and on a monthly to annual basis thereafter. Refresher training is also offered for CMARC and MESIN. Additionally, MEMA offers monthly training for WebEOC and for Maryland's Emergency Management Mapping Application (EMMA) GIS platform.

MEMA coordinates and facilitates NIMS/ICS training throughout the State. MEMA, along with county emergency management agencies and statewide training partners, has transitioned the State to plain language communications and achieved common terminologies for an all-hazards emergency response approach.

Exercises

Multiple components of the statewide communications system are exercised on a regular basis. Many of these systems are included in larger local or statewide exercises. These larger exercises provide opportunities for multiple systems to exercise together. Interoperability exercises are often multi-agency tabletop exercises for key field and support staff. All exercises conducted in Maryland, including interoperable communications exercises, are to utilize the HSEEP construct.

Maryland has also hosted a command post rally, which occurred on May 16, 2007 on the grounds of Camp Frettard Military Reservation and included units from the Maryland State Police, the Maryland Transportation Authority Police, the Maryland Transit Administration, and several local jurisdictions. Other local jurisdictions were in the market for a new command or communications unit and used the event as an opportunity for fact-finding. Additionally, a number of Maryland units participated in the annual command unit rally in Fairfax County, Virginia on May 7, 2009. Both of these events included an interoperability exercise, as well.

Training and Exercises Initiatives

The following table outlines the training and exercises strategic initiatives, gaps, owners, and milestone dates Maryland outlined in its SCIP to improve interoperable communications. Information on the status of these initiatives is also included.

Initiative	Gap	Owner	Milestone Date	Status (Complete, In Progress, Not Started)
Integrate communications components into regularly scheduled exercises.	Need for communications integration.	MEMA	November 2008	Complete
Provide Department of Homeland Security (DHS)-approved training to pre-identified Communications Unit Leaders (COML) and Communications Unit Technicians (COMT).	Insufficient COML trained personnel.	MEMA	November 2009	In Progress
Train response partners on the SCIP and TICPs and on new components of the system within 60 days of implementation. ▪ Develop standardized curriculum. ▪ Identify who should be trained.	Training for new personnel.	Individual agencies / jurisdictions	Ongoing	In Progress
Execute a minimum of one tabletop exercise per region per year.	Lack of regional exercises.	Regional interoperability committees	Summer 2010	In Progress
Execute a minimum of one specialized functional exercise involving command units, radio caches, and "Sites on Wheels" per year.	Lack of formal specialized exercise.	MEMA, agencies/jurisdictions with deployable communications capabilities.	March 2010	In Progress
Continue to make available specialized training for WebEOC, EMMA, CapWIN, and other data platforms	Need for personnel training for data platforms	MEMA, CapWIN	Ongoing	In Progress

Usage

Overview of the testing of equipment and promotion of interoperability solutions

The number of times that interoperability is required for regional incidents varies greatly across the State and from year to year. The most frequent need for interoperability occurs during major weather events. Additionally, real-world events, such as major sporting events, festivals, concerts, protests, National Special Security Events (e.g., January 2009's Whistle-Stop Tour and Presidential Inauguration) and large-scale incidents like the Washington, D.C. sniper attacks, remind leaders of the importance of interoperability and force agencies to explore continual improvements.

Maryland has made it a priority to promote interoperable communications. At the State level, the SIEC developed an outreach component. Every locality across the State has been made aware of the importance of interoperability, as well as the statewide interoperability vision and its eventual capabilities. In the past year, interoperability leadership has briefed members of the legislature, representatives from every county, every state agency involved with radio communications and NGO representatives from every spectrum of public safety and emergency management representation. On local levels, interoperability is addressed during joint exercises, radio committee meetings, and training sessions.

The SIEC's collaborative planning effort will continue to encourage local cross-jurisdictional and cross-disciplinary participation in the evolution of the SCIP through an outreach and public affairs plan. The Outreach Plan includes a set of goals, objectives, key messages, and list of target audiences. The plan is designed as part of a long-term effort for outreach and stakeholder communications in support of SIEC and SCIP goals and objectives. The plan proposes outreach activities such as public meetings and workshops, interactive Web-based information, media and public awareness efforts, and legislative awareness. The outreach effort will target all government and non-government public safety agencies and organizations in Maryland.

Usage Initiatives

The following table outlines the usage strategic initiatives, gaps, owners, and milestone dates Maryland outlined in its SCIP to improve interoperable communications. Information on the status of these initiatives is also included.

Initiative	Gap	Owner	Milestone Date	Status (Complete, In Progress, Not Started)
Develop a campaign to reach all government and non-government agencies and organizations to ensure the statewide communications interoperability strategy gains appropriate input from stakeholders.	Many agencies and jurisdictions unaware of recent developments.	SIEC, PSC, Interoperability Coordinators	February 2008	Complete
Design a website dedicated to statewide interoperability and post communications tools, educational and support materials, and power point presentations.	Lack of web presence for interoperability program.	PSC, Interoperability Coordinators, PMO	July 2010	In Progress