State of Maryland

Statewide Communication Interoperability Plan (SCIP) Implementation Report

November 2010

Homeland Security

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SCIP Implementation Report Overview

The Statewide Communication Interoperability Plan (SCIP) Implementation Report provides an annual update on your State's progress in achieving the initiatives and strategic vision identified in the SCIP. Further, this information will provide OEC with a clearer understanding of your State's capabilities, needs, and strategic direction for achieving interoperability statewide.

- **Part 1, "SCIP Implementation Update"** of the report is to be completed by the Statewide Interoperability Coordinator (SWIC) or Statewide Communication Interoperability Plan (SCIP) Point of Contact (POC). As required by Congress, States provide updates and changes to the status of their Statewide Interoperable Communications Plans in this section. Each State created a SCIP in 2007 and all have been regularly updated. The template sections match those required in the original SCIP, and extensive instructions were provided to the States to understand the requirements of these sections and assist in the development of their SCIPs. The initiatives within each report include milestones identified in the NECP which will be standardized, as well as State-specific efforts.
- **Part 2, "UASI Interoperability Communications Assessment,"** is to be completed by the designated UASI and submitted to the SWIC or SCIP POC. Goal 1 of the NECP states that by the end of 2010, 90% of DHS-designated Urban Areas will be able to demonstrate response-level communications during a routine event. To assess Goal 1, OEC has sent teams of evaluators to the 60 UASI cities to observe communications during a large-scale planned event. In addition to the event observation, this section of template will provide OEC with broader capability data across the lanes of the Interoperability Continuum which are key indicators of consistent success in response-level communications.
- **Part 3, "NECP Goal 2 Methodology,"** is to be completed by the SWIC or SCIP POC. This portion of the SCIP Implementation Report will help the State prepare for the assessment of NECP Goal 2 in 2011. In 2011, capability data (identical to the questions asked of UASIs in the 2010 report) and response-level performance data will be collected at the county/county-equivalent level to meet the NECP Goal 2 mandate of assessing response-level communications in "non-UASI" jurisdictions. Through this section of the template, OEC is asking for each State's methodology, which must address key issues such as: ensuring that all counties will be assessed; ensuring adequate local input; and ensuring completion by the September 30, 2011 deadline. OEC will validate the proposed approaches before States begin the data collection process in FY 2011.

Part 1. SCIP Implementation Update

The following sections ask that States provide an update on the implementation of their SCIP. States will first provide an overview of their current interoperability environment ("State Overview") and then identify their vision and mission statements ("Vision and Mission"). The remaining sections in Part I ask that States consider their progress along the five lanes of the SAFECOM Interoperability Continuum (Governance, Standard Operating Procedures [SOPs], Technology, Training and Exercises, and Usage).

For each lane of the Continuum, States are asked to provide a brief narrative explaining their efforts related to the identified lane. For each lane of the Continuum, States are also asked to address initiatives identified in the National Emergency Communications Plan (NECP) as well as any additional initiatives identified within their State. NECP-related initiatives appear pre-populated in the "NECP Initiatives" section of each table below. Additional initiatives identified by States can be addressed in the "Additional State Initiatives" section of each table below. States are not limited to the number of fields provided in the template and should add additional rows as needed to accurately address all applicable initiatives. When completing these tables, the following information must be provided for each initiative:

- **Gap:** Identify the gap that this initiative will address.
- **Owner:** Identify the State owner of this specific initiative.
- **Milestone:** List the date that this initiative was or is scheduled to be completed.
- **Status:** Identify whether this initiative is complete, in progress, or not started.

The following is an example of how the charts in Part 1 should be completed:

Initiative *(Name / Purpose)*	**Gap** *(Brief Description)*	**Owner** *(Agency, Department, and/or POC)*	**Milestone Date** *(Month/Year)*	**Status** *(Complete, In Progress, Not Started)*
NECP Initiatives				
Establish a full-time statewide interoperability coordinator or equivalent position.	No full time SWIC in place	Governor	2/2009	Complete

Part 1 is to be completed by the SWIC or SCIP POC.

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 is divided into five interoperability regions. 1) the Western Interoperability region consisting of Washington, Allegany and Garrett Counties, 2) the NCR Interoperability region consisting of Prince Georges, Montgomery and Frederick Counties, 3) the Northern Interoperability Region consisting of Baltimore City and the City of Annapolis, Baltimore, Carroll, Harford, Howard, and Anne Arundel counties, 4) the Southern Interoperability region consisting of Charles, Calvert and St. Mary's Counties and 5) the Eastern Interoperability Region consisting of Cecil, Kent, Queen Anne's, Caroline, Talbot, Dorchester, Wicomico, Somerset, Worcester counties and the town of Ocean City. These regions, along with the SIEC, are responsible for developing and implementing regional strategies to provide radio communications interoperability within the regions in accordance with the technical requirements of the Maryland Statewide Communication Interoperability Plan. Maryland does not have any federally recognized tribal nations.

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 will be achieved with 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 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**,**

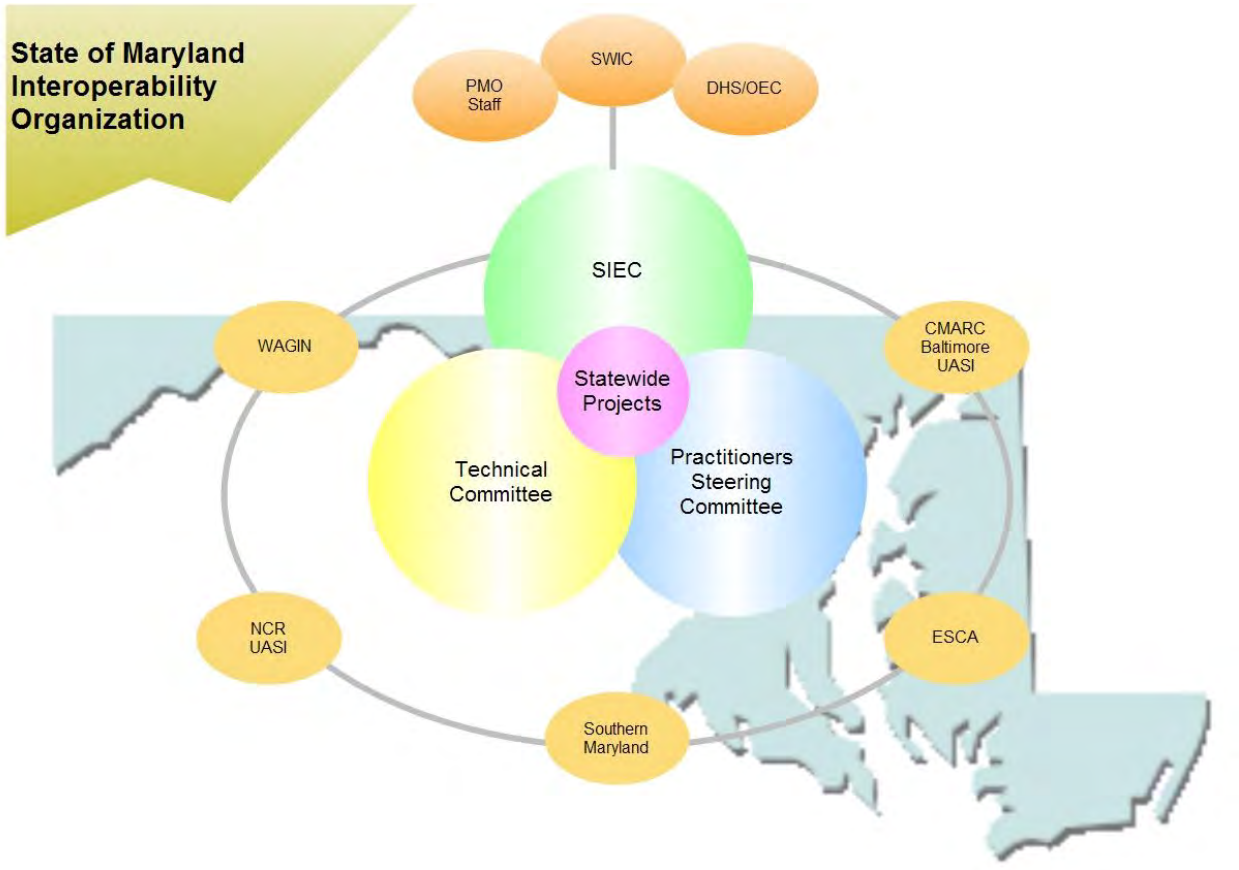
Vision: Achievement of a statewide system that will support communications interoperability and will facilitate real-time communications across boundaries of agencies, jurisdictions, levels of government, and ultimately, across State boundaries with Maryland's neighbors. Interoperable communications 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.

Governance

Overview of the governance structure, practitioner-driven approaches, and funding:

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). The first meeting of the 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

The PSC was established 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 Federal, 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 is responsible for arranging and supporting meetings between State, local and Federal 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.

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. In 2010, Colonel Sheridan, named Ray Lehr as the Statewide Interoperability Director and primary point of contact for interoperability in Maryland.

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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 *(Name / Purpose)*	**Gap** *(Brief Description)*	**Owner** *(Agency, Department, and/or POC)*	**Milestone Date** *(Month/Year)*	**Status** *(Complete, In Progress, Not Started)*
NECP Initiatives				
Establish a full-time statewide interoperability coordinator or equivalent position.	Regional SOPs required statewide.	PSC, Regional Interoperability Committees	Fall 2009 January 2010	Complete
Incorporate the recommended membership into the Statewide Interoperability Executive Committee (SIEC).	Flexible SOPs are required for effective statewide efforts. Ensure continued NIMS compliance.	PSC Operations Subcommittee, Maryland Emergency Management Agency (MEMA)	Winter 2010	PSC to assign members to Operations Subcommittee in June, 2010
Establish the SIEC via legislation or executive order.	Sharing of data and documents.	PMO	Ongoing	Complete
Additional State Initiatives				
Conduct a SCIP review to update the plan.	Lack of bi-annual review process	PMO/Statewide Interoperability Executive Committee (SIEC)/ Practitioner Steering Committee (PSC)	May 2010	Complete
Ratify formal charter for SIEC and PSC.	Lack of updated charter to reflect revised SIEC/PSC membership.	SIEC/PSC	Winter 2010	In Progress
Develop Governance for Statewide initiatives (700 MHz Communications System and CAD/RMS System)	Currently agencies operate and maintain individual systems.	SEIC and other agencies with radio and/or CAD systems	Summer 2011	In Progress
Refresh membership in the State interoperability governance structure.	Lack of regional representatives and renewed SIEC/PSC.	Maryland State Police/PMO	Summer 2009	Complete
Establish regional interoperability committees.	Regional Interoperability Committees (RICs) needed for enhanced governance and Standard Operating Procedures (SOPs).	SIEC / PSC	Fall 2009	Complete
Establish an Interoperability PMO to manage statewide projects.	Statewide system implementation requires project management.	MSP, DoIT	Summer 2009	Complete
Institute SIEC/PSC grant review process and recommendations for multiple funding sources.	Lack of long term funding solutions.	SIEC, Governor's Office, SAA	Ongoing	Complete
Propose State legislation to support the statewide interoperability governance	Governance bodies need both executive and	PMO, SIEC, Legislative	Spring 2011 (draft due	In Progress

Initiative *(Name / Purpose)*	**Gap** *(Brief Description)*	**Owner** *(Agency, Department, and/or POC)*	**Milestone Date** *(Month/Year)*	**Status** *(Complete, In Progress, Not Started)*
structure and funding.	legislative support.	members	Feb 2011)	
Staff Program Management Office with sufficient resources to manage major statewide projects (700MHz, Closed Circuit Television systems [CCTV], Computer Aided Dispatch [CAD] and Records Management System [RMS]).	Lack of expert project management.	PMO/SIEC and PSC	Summer 2010	In Progress. CAD/RMS Program Manger and Governance coordinator on board.
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. Lack of capacity and upgrades.	PMO, SIEC, Governor's Office, Supporting State Agencies	Ongoing	In Progress; FY11 funding secured
Establish Executive Orders (EO) with bordering States and District of Columbia to encourage communications interoperability.	Lack of commitment from Executive branch.	PMO, Governor's office	Delaware, West Virginia reviewing EO Draft Summer 2010	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 completed Spring 2010. Phase II underway.	In Progress
Establish process for reviewing Federal initiatives.	Need to identify ways to track federal initiatives and educate stakeholders.	PMO	Ongoing	In Progress

Standard Operating Procedures

Overview of the shared interoperable communications-focused SOPs

Maryland has several regional sets of SOPs for communications, including SOPs for each interoperability region in the State. 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 also common in Maryland for specific events and incidents in many locales. 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).

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 *(Name / Purpose)*	**Gap** *(Brief Description)*	**Owner** *(Agency, Department, and/or POC)*	**Milestone Date** *(Month/Year)*	**Status** *(Complete, In Progress, Not Started)*
NECP Initiatives				
Tactical planning among Federal, State, local, and tribal governments occurs at the regional interstate level.	Understanding of interoperability methods.	PCS, Regional Interoperability Committees	Summer, 2011	In progress
All Federal, State, local and tribal emergency response providers within UASI jurisdictions implement the Communications and Information Management section of the National Incident Management System (NIMS).		PCS, Regional Interoperability Committees	Fall, 2011	In progress
Incorporate the use of existing nationwide interoperability channels into SOPs.		PCS, Regional Interoperability Committees	Summer, 2011	In progress
Update SCIP to reflect plans to eliminate coded substitutions throughout the Incident Command System (ICS).		MSP	Summer, 2011	In progress
Define alternate/backup capabilities in emergency communications plans.		PSC	Summer, 2011	In progress

Initiative *(Name / Purpose)*	Gap *(Brief Description)*	Owner *(Agency, Department, and/or POC)*	Milestone Date *(Month/Year)*	Status *(Complete, In Progress, Not Started)*
Additional State Initiatives				
Conduct workshop in each region to establish TICPs.	Regional SOPs required statewide.	PSC, Regional Interoperability Committees	Fall 2009 January 2010	Complete
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 Maryland National Incident Management System (NIMS) protocols and procedures.	Flexible SOPs are required for effective statewide efforts. Ensure continued NIMS compliance.	PSC Operations Subcommittee, Maryland Emergency Management Agency (MEMA)	Winter 2010	PSC to assign members to Operations Subcommittee in Jan., 2011
Develop a Collaboration site for the collection of TICPs/ SOPs, and other documents that will serve as an online reference point for public safety personnel throughout the State.	Sharing of data and documents.	PMO	Feb, 2010	Complete

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) band. Radio systems operated by local agencies throughout the State utilize frequency bands in VHF low band, VHF high band, UHF, 800 and 700 MHz. System types include conventional, Motorola 800 and 700 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). Maryland has also filed a waiver request with the FCC to begin planning for the National Public Safety Broadband Network.

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.

Major Systems

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.

Shared Statewide System *(Name)*	**Description** *(Type, frequency, P25 compliance, etc.)*	**Status** (Existing, planned, etc.)
Maryland Statewide Radio System	700 MHz, P-25 compliant public service grade system.	Contract Awarded November 17, 2010

State Systems *(Name)*	**Description** *(Type, frequency, P25 compliance, etc.)*	**Status** (Existing, planned, etc.)
TAC-Stack	Equipment placed at sites throughout the State configured for mutual aid channels on very high frequency (VHF), ultra high frequency (UHF), 800 MHz, and eventually 700 MHz. Designed to link mutual aid channels between different frequency bands transparent to users.	In progress. Site inventories and configurations have been completed. An internet protocol (IP)) addressing scheme has been developed and sufficient bandwidth has been secured to transport the signals to the control points.
NetworkMaryland	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.	Pending results of BTO grant progress.

Regional Systems *(Name)*	Description *(Type, frequency, P25 compliance, etc.)*	Status (Existing, planned, etc.)
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 Washington Metropolitan Area Transit Authority 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.	Complete
Maryland Eastern Shore Interoperability Network (MESIN)	MESIN utilizes National Public Safety Planning Advisory Committee (NPSPAC) 800 MHz mutual aid channels combined with an 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.	Phase I Complete Phase II adding additional 800 MHz UHF and VHF sites
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. Phase I and II completed. Phase III underway to expand coverage.
Washington Allegany Garrett Interoperability Network (WAGIN)	WAGIN will utilize Cisco IP Interoperability and Collaboration System (IPICS) technology to bridge existing communications systems.	In Progress Phase I completion date June 2010. Phase II in progress. Future expansion of the program is hoped to link WAGIN to Pennsylvania and West Virginia as well as expand TAC-stack coverage.

Technology Initiatives

The following table outlines the technology strategic initiatives, gaps, owners, and milestone dates [State] outlined in its SCIP to improve interoperable communications.

Initiative *(Name / Purpose)*	Gap *(Brief Description)*	Owner *(Agency, Department, and/or POC)*	Milestone Date *(Month/Year)*	Status *(Complete, In Progress, Not Started)*
NECP Initiatives				
Program nationwide interoperability channels into all existing emergency		PMO, Statewide Radio Committee	TBD	In progress

Initiative *(Name / Purpose)*	**Gap** *(Brief Description)*	**Owner** *(Agency, Department, and/or POC)*	**Milestone Date** *(Month/Year)*	**Status** *(Complete, In Progress, Not Started)*
responder radios.				
Additional State Initiatives				
Construct Phase I of a statewide 700 MHz voice and data interoperable communications system. Complete initial build-out of system.	Lack of statewide standards-based shared system for voice and data interoperable communications.	PMO, SIEC, PSC, DOIT	2011 2015	In Progress Contract awarded to Motorola Nov., 2010
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 to 5 years)	In Progress
Procure and construct a CAD/RMS system for State agencies with interoperable linkage to local agencies.	Lack of adequate CAD system for state agencies. No CAD data sharing with locals.	PMO, CAD Steering Committee	December 2011	In Progress Contract awarded to InterAct Nov., 2010
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.	Maryland Institute for Emergency Medical Services Systems (MIEMSS)	Spring 2011	In Progress
Develop video integration project	Lack of interoperability amongst surveillance systems and jurisdictions / agencies.	PMO, Maryland Department of Transportation (MDOT)	Ongoing	In Progress
Complete data connectivity Public Safety Intranet (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.	PMO, SIEC, MIEMSS	Spring 2011	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.

Regional workshops have been conducted by the WAGIN group with their counterparts in West Virginia on September 19 and 20 and a second is planned with Pennsylvania for December 12 and 13. Prince Georges Co., on behalf of the NCR, conducted an Interoperability Workshop on 17 and 18.

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 Fretterd 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 *(Name / Purpose)*	**Gap** *(Brief Description)*	**Owner** *(Agency, Department, and/or POC)*	**Milestone Date** *(Month/Year)*	**Status** *(Complete, In Progress, Not Started)*
NECP Initiatives				
Incorporate the use of existing nationwide interoperability channels into training and exercises.		MEMA		In progress
Complete disaster communications training and exercises.		MEMA		In progress
Additional State Initiatives				
Provide Department of Homeland Security (DHS)-approved training to pre-identified Communications Unit Leaders (COML) and Communications Unit Technicians.	Insufficient COML trained personnel.	MEMA		In Progress
Conduct events where DHS/OEC can validate NECP Goal 1 compliance.	Need to establish interoperable communications within 1 hour of event.	PMO, UASIs, MEMA	Oct. 2010	Complete
Develop plan for State verification of NECP Goal #2 within all regions.	Need to establish interoperable communications within 1	PMO, Regional Interoperability Groups, MEMA	Winter 2010	Complete

Initiative *(Name / Purpose)*	**Gap** *(Brief Description)*	**Owner** *(Agency, Department, and/or POC)*	**Milestone Date** *(Month/Year)*	**Status** *(Complete, In Progress, Not Started)*
	hour of event.			
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	Complete
Execute a minimum of one tabletop exercise per region per year.	Lack of regional exercises.	Regional interoperability committees	Summer 2010	Complete
Develop outreach and educational programs for interoperable communications.		PMO, Regional interoperability committees		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 *(Name / Purpose)*	**Gap** *(Brief Description)*	**Owner** *(Agency, Department, and/or POC)*	**Milestone Date** *(Month/Year)*	**Status** *(Complete, In Progress, Not Started)*
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	Complete

National Emergency Communications Plan Goals

The National Emergency Communications Plan (NECP) established a national vision for the future state of emergency communications. The desired future state is that emergency responders can communicate as needed, on demand, and as authorized at all levels of government across all disciplines. To measure progress towards this vision, three strategic goals were established:

Goal 1—By 2010, 90 percent of all high-risk urban areas designated with the Urban Area Security Initiative (UASI)[1] are able to demonstrate response-level emergency communications[2] within one hour for routine events involving multiple jurisdictions and agencies.

Goal 2—By 2011, 75 percent of non-UASI jurisdictions are able to demonstrate response-level emergency communications within one hour for routine events involving multiple jurisdictions and agencies.

Goal 3—By 2013, 75 percent of all jurisdictions are able to demonstrate response level emergency communications within three hours, in the event of a significant incident as outlines in national planning scenarios.

As part of the Goal 1 implementation process, OEC required UASIs to demonstrate response-level emergency communications during a planned event. **The Baltimore UASI demonstrated this capability to OEC observers on October 24th during a Baltimore Ravens football game at M&T Bank Stadium in downtown Baltimore.** Additionally, as part of the State's SCIP Implementation Report update in 2010, OEC is requiring information on UASIs' current capabilities. The capability questions are presented in Part II. UASIs must complete and submit responses on the capability questions to the SWIC or SCIP POC. The data generated from these questions will assist OEC in its analysis of Goal 1 performance and in identifying national trends in urban area communications. Similarly, to prepare for Goal 2 implementation in 2011, States are being asked to develop a methodology for collecting capability and performance data Statewide (please see Part III).

[1] As identified in FY08 Homeland Security Grant Program

[2] Response-level emergency communication refers to the capacity of individuals with primary operational leadership responsibility to manage resources and make timely decisions during an incident involving multiple agencies, without technical or procedural communications impediments.

Part 2 - UASI Communications Interoperability Capabilities Assessment Grid

The "Capabilities Assessment Grid" is to be completed by the designated UASI and submitted to the SWIC or SCIP POC. States that do not have UASIs do not need to complete this section.

For each lane of the Interoperability Continuum (Governance, Standard Operating Procedures [SOPs], Technology, Training and Exercises, and Usage), please select the one row that best describes the assessed area by checking the appropriate box. While multiple descriptions may apply, UASIs should identify the one row that most closely describes their highest level of capability achieved. The below capabilities assessment grid is to be completed by each UASI within the State.

Lane	Question	Baltimore UASI
Question 1: (Governance)	Urban area decision-making groups are informal, and do not yet have a strategic plan in place to guide collective communications interoperability goals and funding.	☐
	Some *formal* agreements exist and *informal* agreements are in practice among members of an Urban Area decision making group; Urban Area strategic and budget planning processes are beginning to be put in place.	☐
	Formal agreements outline the roles and responsibilities of an Urban Area decision making group, which has an agreed upon strategic plan that addresses sustainable funding for collective, regional interoperable communications needs.	☒
	Urban Area decision making bodies proactively look to expand membership to ensure representation from broad public support disciplines and other levels of government, while updating their agreements and strategic plan on a regular basis.	☐
Question 2: (SOPs)	Urban Area interoperable communications SOPs are not developed or have not been formalized and disseminated.	☐
	Some interoperable communications SOPs exist within the urban areas and steps have been taken to institute these interoperability procedures among some agencies.	☐
	Interoperable communications SOPs are formalized and in use by all agencies within the Urban Area. Despite minor issues, SOPs are successfully used during responses and/or exercise(s).	☒
	Interoperable communications SOPs within the Urban Area are formalized and regularly reviewed. Additionally, National Incident Management System (NIMS) procedures are well established among all agencies and disciplines. All needed procedures are effectively utilized during responses and/or exercise(s).	☐

Lane	Question	Baltimore UASI
Questions 3: (Technology)	Interoperability within the urban area is primarily achieved through the use of gateways (mobile/fixed gateway, console patch) or use of a radio cache.	☐
	Interoperability within the Urban Area is primarily achieved through the use of shared channels or talkgroups.	☐
	Interoperability within the Urban Area is primarily achieved through the use of a proprietary shared system.	☒
	Interoperability within the Urban Area is primarily achieved through the use of a standards-based shared system (e.g., Project 25).	☐
Questions 4: (Technology)	What frequency band(s) do public safety agencies within the urban area currently utilize? (e.g., VHF-Low Band, VHF-High Band, UHF 450-470, UHF "T-Band" 470-512, UHF 700, UHF 800, UHF 700/800)	VHF(Low) UHF, 800MHz
Question 5: (Training & Exercise)	Urban Area public safety agencies participate in communications interoperability workshops, but no formal training or exercises are focused on emergency communications.	☐
	Some public safety agencies within the Urban Area hold communications interoperability training on equipment and conduct exercises, although not on a regular cycle.	☐
	Public safety agencies within the Urban Area participate in equipment and SOP training for communications interoperability and hold exercises on a regular schedule.	☒
	Urban Area public safety agencies regularly conduct training and exercises with a communications interoperability curriculum addressing equipment and SOPs that is modified as needed to address the changing operational environment.	☐
Questions 6: (Usage)	First responders in the Urban Area seldom use interoperability solutions unless advanced planning is possible (e.g., special event).	☐
	First responders in the Urban Area use interoperability solutions regularly for emergency events, and in a limited fashion for day-to-day communications.	☒
	First responders in the Urban Area use interoperability solutions regularly and easily for all day-to-day, task force, and mutual aid events.	☐
	Regular use of interoperability solutions for all day-to-day and out-of-the-ordinary events in the Urban Area on demand, in real time, when needed, as authorized.	☐
Questions 7: (Usage)		

Cell Service	90%
Sat phone	50%
Broadband Mobile Data	20%

Part 3. NECP Goal 2 Methodology

The below methodology for Goal 2 is to be completed by the SWIC or SCIP POC.

Goal 2 Methodology

In the section below, describe the methodology that you will use in 2011 for demonstrating and reporting Goal 2 of the NECP for all county or county equivalents in your State. Methodologies should address the following:

- *The incorporation of all counties or county equivalents*
- *Proposed approach to collect capability data (including from individual UASI counties)*
- *Proposed approach to collect performance data (including from individual UASI counties)*[3]
- *County-level input prior to submission of Goal 2 data to OEC*
- *Completion of data collection by September 30, 2011*

Maryland plans to employ the regional approach for Goal 2 observation. Every county will be involved in capability and performance measurements; however, reporting will occur through the regional structure. The Maryland Office of Interoperability Project Management Office (PMO) will lead the effort for the five regions. A graphical representation can be found in Appendix B.

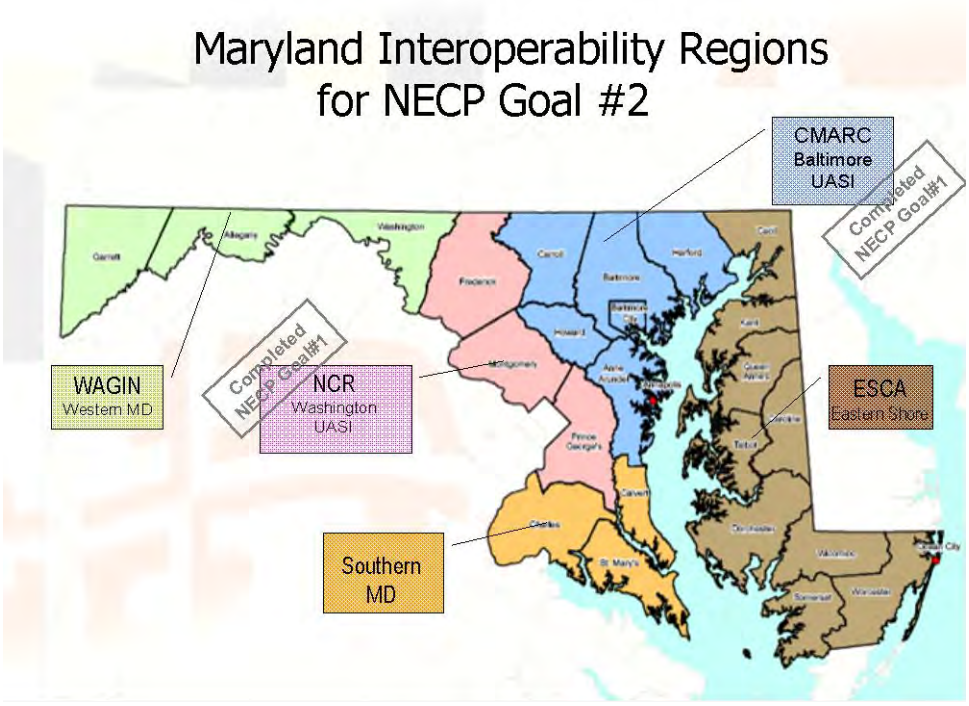
Initially, the PMO will reach out to regions in order to develop a draft of implementation plans for Goal 2. The methodology involves a written evaluation and a performance assessment, with a strong emphasis on interoperability across disciplines. For the written evaluation, the PMO will work with regions to finalize Tactical Interoperable Communications Plans (TICPs), governance, and technical solutions for regional interoperability. The performance assessment will include planning a demonstration and conducting the exercises regionally.

[3] Counties with significant participation in NECP Goal 1 demonstrations can use the results for their Goal 2 performance data

NECP Goal #2 Planned Methodology

- Contact Name: Ray Lehr
- Position/Title: Interoperability Director
- State: Maryland
- Number of counties (or county equivalents) in State: 24

The State of Maryland is divided into five interoperability regions. Each region has developed TICPs and SOPs for interoperability and has deployed (Southern MD is still in the planning stage) regional interoperability interim solutions.



It is the State's plan to observe events in each of the regions (excluding the two UASI regions completed under Goal #1)

Each region has an active governing body which will serve as the local representatives for the event. The staff of the Interoperability PMO will act as the observers and will complete the modified questionnaire on the following pages.

NECP Goal 2 - State of Maryland

Region: _____
Event:_____ Date:_____
The following elements will be observed by the State of Maryland Interoperability PMO observation team.

Common Policies and Procedures	Observer	Yes/No	Comments
Element: 1 Interagency communications policies and procedures were common or consistent amongst all responding agencies.			
Element: 2 Established interagency communications policies and procedures were followed throughout the incident.			
Element: 3 Interagency communications policies and procedures across all responding agencies were consistent with NIMS.			
Element: 4 A priority order for use of interagency communications resources was followed as established in standard operation procedures or plans, such as the Tactical Interoperable Communications Plan (TICP).			
Element: 5 A primary interagency operations talk path was clearly established by procedure or communicated to responders early in the incident.			
Element: 6 Common terminology and plain language were used in all interagency communications.			
Element: 7 Clear unit identification procedures were used.			
Element: 8 Common channel names were used for designated interoperability channels.			
Responder Roles and Responsibilities	**Observer**	**Yes/No**	**Comments**
Element: 9 Multiple organizations with inherent responsibility for some			

portion of the incident were present and joined in a unified command with a single individual designated with the Operations Section Chief responsibilities.			
<u>Element: 10</u> Span of controls was maintained amongst the primary operational leadership: The Operations Section Chief and first-level subordinates.			
<u>Element: 11</u> Communications Unit Leader (COML) roles and responsibilities were carried out by the Incident Commander (IC)/Unified Command (UC) or designee. ▪ **Necessary communications resources were effectively ordered using documented procedures.** ▪ **A communications plan was established by procedure or developed early in the incident.**			
Quality and Continuity	**Observer**	**Yes/No**	**Comments**
<u>Element: 12</u> No more than one out of 10 transmissions was repeated amongst the primary operational leadership due to the failure of initial communications attempts.			
<u>Element: 13</u> Upon failure or overload of any primary communications mode, a back-up was provided.			
<u>Element: 14</u> Primary operational leadership communicated adequately to manage resources and make timely decisions during the incident or event.			

Event Incident Commander:_____ Regional Representative_____

Statewide Interoperability Director:_____
Interoperability PMO Observation Team Members:

_____ _____ _____

State of Maryland NECP Goal #2 Schedule