Mid-Atlantic Regional Symposium

Recap

The Mid-Atlantic Regional Symposium was held May 20–22, 2003, in Wilmington, Delaware. This symposium, sponsored by the Public Safety Wireless Network (PSWN) Program and hosted by the Delaware State Police (DSP), was attended by more than 185 local, state, and federal public safety and government officials. They came together to discuss Delaware's achievements with regard to its statewide radio system and the partnerships they have formed with their neighbors to improve interoperability in the Mid-Atlantic region.

The agenda of this three-day symposium included introductions, presentations, and facilitated discussions, all with opportunities for audience questions. These activities provided a forum that permitted participants to better understand the problems and solutions associated with interoperability. Participants learned of ongoing activities to address critical short-term interoperability needs and long-term planning efforts for the future implementation of statewide public safety communications systems.

Governor Welcomes Public Safety Officials and Addresses Communications Interoperability

Secretary James L. Ford, Delaware Department of Public Safety (DPS), gave his welcome address, speaking of a future in which there would be no issue of interoperability for first responders. He stressed the importance of having strong leadership to overcome obstacles, public safety officials putting aside political concerns, and vendors sharing proprietary information to build necessary equipment and systems. Secretary Ford then introduced Ruth Ann Minner, Governor of Delaware.

> *"As you work toward your destination, make each step easier."*
>
> James L. Ford
> Secretary, Delaware DPS

Pictured from left to right—Ruth Ann Minner, Governor of Delaware; William Carrow, Chief, Communications Section, DSP; Julio "Rick" Murphy, PSWN Program Manager, Department of Homeland Security

> *"It is not Homeland Security but Hometown Security, and we must do what needs to be done, including suspending bureaucracy to solve the problems inhibiting interoperability."*
>
> The Honorable Ruth Ann Minner
> Governor of Delaware

Governor Minner shared her experience with public safety communications, which began long before September 11, 2001. As a new legislator in 1973, she started working on public safety "interoperability" although that word was not used at that time. She stated that although budgetary issues would continue to abound, Delaware would continue to work on

its statewide 800 megahertz (MHz) system to allow public safety personnel to communicate inside buildings. She stressed the goal was to protect every Delaware citizen and ensure that public safety personnel could communicate for their safety. Governor Minner commended all the first responders and thanked them for improving every citizen's life.

She then introduced Colonel L. Aaron Chaffinch, Superintendent, DSP. Colonel Chaffinch expressed his pleasure that DSP had been able to host the symposium and urged all attendees to take advantage of the networking possibilities. He wished the attendees much success during the meeting. He also stated, "It is not enough to plan (for interoperability)—interoperability must be practiced."

The PSWN Program—Working With the States to Improve Communications Interoperability

Mr. Robert E. Lee, Jr., PSWN Program Manager, Department of Justice (DOJ), defined interoperability as communications on demand and in real time, alluding to the issues Governor Minner had raised in her keynote address. He stressed that the actions taken today would benefit public safety in the future.

Mr. Lee stated that the goal of the PSWN Program in its first five years was to better understand issues related to interoperability, and the second five years would be devoted to implementing interoperability just as Delaware was doing with its 800 MHz system. As a partnership between the DOJ and the Department of the Treasury (now Department of Homeland Security), the PSWN Program developed the Public Safety Wireless Interoperability National Strategy or WINS which—

- Provides strategies and solutions to improve wireless communications interoperability
- Contains technical solutions to communications interoperability problems and updated guidelines and approaches
- Captures the state of interoperability nationwide.

Mr. Lee emphasized the need for spectrum and the need for interoperability with other agencies such as public utilities and special service districts such as railroad law enforcement.

He closed by sharing several exciting new projects in which the program was now engaged—

- Identifying solutions for emergency interagency communications in the top 25 high-threat cities.
- Investigating solutions for integrating proprietary commercial communications systems with land mobile radio (LMR) systems
- Conducting an in-depth analysis of the existing radio coverage along the U.S.–Canadian border
- Characterizing the success of interoperable communications of the Washington, DC, Sniper Task Force
- Developing an educational curriculum on pursuing grants and funding for public safety wireless networks
- Engaging state leaders in several states through workshops and forums.

To learn more about the PSWN Program, please visit www.pswn.gov.

Delaware State Police Partners to Build Interoperability

DSP has developed an 800 MHz digital trunked radio system with partners from public safety, utilities, National Guard, and federal agencies.

Chief William Carrow, Communications Section, DSP, described the system as a single, shared, 800 MHz trunked digital LMR system, supporting all of the state's public safety agencies. He described the system as having 34 channels; supporting 40 agencies, 700 talk groups, and 9,000 end-user pieces of equipment; and handling 115,000 calls per day. Table 1 shows the partners on Delaware's system.

Table 1
Direct System Partners

- Law enforcement—state, county, local
- Fire—60 volunteer fire companies
- Emergency Medical Services (EMS)—Paramedics
- Natural Resources & Environmental Control
- Department of Corrections
- Department of Transportation and Transit
- Public Utilities
- Delaware Emergency Management Agency
- Federal Agencies—Bureau of Alcohol, Tobacco, Firearms, and Explosives, Drug Enforcement Administration, and the Federal Bureau of Investigation (FBI)
- National Guard

Chief Carrow said that Delaware would be very willing to forge relationships to enhance the state's ability to communicate with nearby states and regions. He described current interoperability initiatives, which included developing agreements with the Maryland State Police and Queen Anne's, Caroline, and Talbot counties—the three Maryland counties adjacent to Delaware.

Chief Carrow stated that the use of encryption on the Delaware system was very important to some of the partners and added that specific talk groups had this capability. He went on to describe the police mutual aid, which allowed for an extra layer of security county- and state-wide. He indicated that DSP was also in the development stage of creating a mutual-aid zone in commanders' radios.

Chief Carrow then described how DSP was proactive with regard to media and public monitoring of non-encrypted channels and had "live" Internet and radio monitoring available on its Web site. DSP had also created an 800 MHz media/public access standard operating procedure. He stated that when the site went live, the DSP Web site immediately had more than 500 hits from across the country. In addition, Chief Carrow indicated that, before scanners were readily available, DSP also endorsed a policy of programming mobile radios with six talk groups that were monitor-only.

In summary, Delaware's 800 MHz trunked digital system provides for full public safety statewide coverage and excellent in-state interoperability. The state continues with its plans to include surrounding regions and states, as well as to enhance in-building coverage.

Amber Alert and the Emergency Alert System in Delaware

Ms. Margaret Caskey, DSP, presented the history, development, and the current status of the Amber Alert and the Emergency Alert System (EAS).

The EAS was designed to provide the President of the United States with a means to address the American public in the event of a national emergency. Ms. Caskey

explained that this system had changed as technology had improved. She said Delaware's version was the Emergency Management Network (EMnet), which consisted of a satellite receiver with a computer and software designed specifically for EMnet. The purpose of the software was to issue alerts similarly to e-mails with audible and visual warnings.

Ms. Caskey stated that when Delaware initiated the Amber Alert system, it was added to EMnet and could be activated like the EAS except the Amber Alert must meet certain criteria in order to gain approval to activate. Ms. Caskey mentioned that the day after she submitted her presentation to the PSWN Program, President Bush signed a bill for the national Amber Alert system, making federal grants available to implement and upgrade state Amber Alert systems. Copies of a video detailing how the system works was made available to attendees.

Montgomery County Official Discusses Role of Communications and Coordination in the Washington Metropolitan Area Sniper Case

Effective communications and coordination were key elements in the investigation and the successful resolution of the Washington metropolitan area sniper incident. Mr. Steve Souder, Director, Montgomery County, Maryland, 911 Emergency Communications Center, presented a timeline of the first few days of that fateful October and the lessons learned.

He described the shootings as a unique challenge to public safety and interoperability. With multiple shootings in 90 minutes and no witnesses, public safety officials lacked information and began using the term "ghost with a gun." As news spread, the number of calls coming in to the 12-person communications center multiplied exponentially. Montgomery County public safety officials understood they did not have the resources to investigate and asked for assistance from federal agencies as well as the Maryland and Virginia State Police, forming the sniper task force.

Although the new 22-channel, 800 MHz system radios were already programmed, they had not yet been distributed within the county. Therefore, 200 radios were distributed to members of the task force and surrounding areas, giving them interoperability. Montgomery County also had a new computer-aided dispatch (CAD) system but it had not yet been used.

Table 2
Communications Lessons Learned from the Sniper Incident

• Understand protocols—within the task force "10" codes were different for each public safety agency
• Know who to contact and how to set up an 800 tip line
• Existing computer-aided dispatch (CAD) systems should have the capability of housing tips from the 800 number
• Maintain a paper trail for equipment distributed—all but 5 of the 200 radios were returned to Montgomery County
• Use available resources—vendors worked with the county to accommodate 1,000 non-county users

More than 100,000 tips came in to the 911 system and were taken down on paper. Realizing their inability to analyze these tips, Montgomery County officials reached out to the FBI to request use of its "Rapid Start" program, which allowed entry of the 100,000 pieces of paper (the equivalent of 20 boxes of printer paper) into the computers. In addition, the task force set up an 800 number for the public, which led investigators to the tree trunk in Tacoma, Washington. This clue led to the identity of

the shooters, who were then caught October 22, with the help of a tip called in to the 800 number.

Open Forum—Local Public Safety Officials Share Problems and Solutions

This panel provided the audience with a unique opportunity to ask questions of decision makers from the local executive level. Set in a town hall atmosphere, it allowed the audience to better understand their perspective on the communications issue of interoperability.

Speakers in attendance were, Ms. Marilyn Praisner, Councilmember, Montgomery County, Maryland, and PSWN Program Executive Committee member, Mr. Steve Souder, Director, Montgomery County, Maryland, 911 Emergency Communications Center, and Mr. Richard Reynolds, Frequency Coordinator, Delaware Department of Technology and Information.

Ms. Praisner posed the question of obtaining funding for the Maryland and Delaware systems. Mr. Souder responded that it was crucial to socialize the needs for the system with elected and appointed officials in order to avoid "sticker shock" for the cost of the technology requested. Mr. Reynolds explained the difficult situation in which the state found itself. The state had appropriated the funds for equipment and in order to have buy-in from the locals radio equipment was given freely which put them at a disadvantage for funding of the towers as the locals refused to pay. The state opted to lease the towers in order to pay for maintenance.

Ms. Praisner asked Mr. Reynolds and Mr. Souder to name some of the barriers to coordination and partnerships. Mr. Reynolds stated the biggest challenge was getting the local agencies to give up their low-band frequencies in exchange for the new 800 MHz frequencies. Mr. Souder said that Montgomery County had worked out many of its issues, especially the importance of coordination and partnerships with the Federal Government agencies, because of the close proximity to the capital. He pointed out that the partnership with the PSWN Program continued to help promote interoperability across the country while remaining objective.

In summary, Maryland now designates a certain number of radios for use in emergencies as was done during September 11, 2001, and the sniper incident, and Delaware has created encrypted talk groups accessible by federal agencies.

The Joint Operations Center—A Coordinated Effort During Emergencies

A joint operations center (JOC) is a multi-agency coordinated effort at an incident. Mr. Jamie Turner, Director, Delaware Emergency Management Agency, said that Delaware had a very strong response system, including policies and procedures, which was based on preparedness, planning, training, and exercises. He explained that in putting together a JOC, there were certain factors that must be taken into consideration. These factors included politics, organizational issues, agency agendas, incident-related issues, and a leadership and command presence.

Mr. Turner indicated that when multiple agencies must come together to form a JOC, politics, both internal and external to the agencies, might affect the outcome of the incident. He gave an example—every 20 minutes that traffic was stopped for incident control, it took four hours to get traffic flowing normally again. Therefore, it

was vitally important to solve problems as quickly as possible.

He closed by stressing the need for constant improvement and sharing lessons learned from each incident—being proactive instead of reactive. Personnel involved should be debriefed, responses should be critiqued, follow-up plans should be made, and education and training should be continued.

Changing the Landscape—Chief Information Officers' (CIO) Discuss the Importance to Interoperability

This session explored CIOs' recognition and understanding of the value of technology assets for public safety communications interoperability. It provided a unique opportunity for practitioners to understand the different perspectives of these elected and appointed officials.

Ms. Aldona Valicenti, CIO, Commonwealth of Kentucky, explained the Governor of Kentucky's strategies and indicated her role in executing those strategies. She described her role as CIO within the Office of Technology, which had broad guiding principles such as viewing technology from an enterprise wide perspective and ensuring electronic access to information and services while maintaining security and privacy. Ms. Valicenti referred to House Bill 309 signed by the Governor, which formed Kentucky's Wireless Interoperability Executive Committee (WIEC). The committee's challenges are finding a solution for an aging public safety network, keeping the legislature informed and engaged in interoperability efforts, and providing leadership and information on how agencies could work to gain data and voice interoperability.

Pictured from left to right—Steve Long, CIO, Department of Law and Public Safety, New Jersey, Aldona Valicenti, CIO, Commonwealth of Kentucky, and Tom Jarrett, CIO, Secretary of the Delaware Department of Technology and Information.

Similarly, Mr. Steve Long, CIO, Department of Law and Public Safety, New Jersey Office of the Attorney General, described his task as rebuilding the old microwave backbone and incorporating interoperability where feasible. He said New Jersey's challenges lay in the budget and procurement process, and bringing all stakeholders to the table. New Jersey's plan of attack had been to create a council capable of dealing with the interoperability issues, conduct surveys, and create a strategic plan that would be presented to the legislature.

"Prior to September 11th, the NJ CIO Department had little involvement in state radio purchases. My first PSWN conference was the beginning of our involvement."

Mr. Tom Jarrett, CIO, Secretary of the Delaware Department of Technology and Information, said his role was to operate and maintain the working 800 MHz system. He reiterated the importance of explaining, supporting, publicizing, and advocating funding because legislators did not always fully comprehend the need to spend money. He gave the example of Year 2000 preparedness, "We were asked why we

spent the money when nothing happened? Of course, that was precisely the results desired."

> *"The PSWN Program has set the standard for states to formalize efforts to improve interoperability. PSWN has helped me formalize something [KYWIEC] that was informal. This charges the state with developing a strategic plan."*
>
> *Aldona Valicenti*
> *CIO, Commonwealth of Kentucky*

The panel responded to several audience questions regarding funding, for example, were E-911 surcharges being used for other things besides public safety. The panelists stated that both Delaware and Kentucky had specific laws preventing the use of these designated funds for anything other than public safety; New Jersey's legislation in this regard was still pending.

Officials Manage Special Events Through Interoperable Communications

Twice each year, the City of Dover's population grows from 32,000 to approximately 150,000 over the period of a weekend for NASCAR related events. To manage a change of this magnitude, the Dover Downs Transportation Management Committee, which consists of Dover Motor Sports, City of Dover Police, Delaware State Police, and Delaware Department of Transportation (including Traffic, Transit Corporation, and Maintenance and Operations), meets monthly to develop a management plan for each race. The committee also plans for future operational and geometric improvements as well as holding post-race reviews.

However, that is not the only coordination required during these events. Just like a JOC, police, fire, and EMS are on scene and communicating with each other through Delaware's 800 MHz system. In addition to sharing the communications system, they also share a CAD system.

Housed in a central command center are public safety officials from each discipline. With the CAD system in place, they have the ability to track all officers on patrol, EMS, and fire personnel in and outside of the track. The system is National Crime Information Center capable, and wireless data is now a standard tool.

Digital Scanners Offer an Interoperability Solution

Mr. Richard Barnett, Scanner Master Corporation, gave an overview of the history of the scanner and its importance in public safety technology today.

Scanners, first tunable, then crystal controlled, then user-programmable, took a big leap forward approximately six years ago with the incorporation of trunking capability. However, the latest leap—to digital scanners—took place in December 2002. Mr. Barnett indicated that current industry players are Uniden-Bearcat, Radio Shack, AOR, Icom, and Yaesu. He stated that the scanner had benefited public safety in several ways, including providing cross-banding capability and covering all bands of operation.

Mr. Barnett closed by stating that the scanner of today provided a reasonably priced solution for the public and news media to monitor non-encrypted talk groups.

Media Touts Delaware's Alternate Public Safety Communications Monitoring Tool

Currently, the media has alternatives to programmed radios and scanners in order to listen to public safety talk groups. When

DSP migrated to an 800 MHz trunked digital radio system, it began offering live broadcasts in hourly increments from its Internet Web site. This panel of media representatives, from television, radio, and newspaper, described the benefits of using the Internet-based, monitoring tool to collect and disseminate information to the public.

The panel members described similar experiences with obtaining information. Before DSP offered its Internet monitoring tool, the primary sources of information were tips and scanners. However, the information had to be verified and the Public Information Officer (PIO) had to be called. However, even with all the current options for gleaning information, the panel members still urged officers to communicate with their PIOs so that information could be updated on a regular basis.

The panelists closed by stating that media was a very competitive market, and the focus was to provide the public with news and information. Their job was made that much easier with the help of the Internet-based monitoring tool provided by DSP.

Partnerships in Process—State-to-State and State-to-Region

Although it is a small state, Delaware is adjacent to Maryland, New Jersey, and Pennsylvania, has access to the second largest port in the United States, and has Interstate 95 running through it. Because it can be traversed in just a few hours, there is a vital need to be able to communicate with the surrounding jurisdictions.

Of the areas represented on the panel, only the City of Wilmington functions on an 800 MHz analog system, and the Maryland State Police (MSP) operates using multiple ACU-1000s.

Mr. Michael Bennett, Director, Electronic Services Section, MSP, explained that because the State of Maryland was now waiting to develop a statewide 700 MHz system, DSP and MSP had come up with a solution that allowed them to communicate via mobile units that were exchanged.

Maryland State Police Communications Vehicle from the Electronic Services Section.

Chief Bill Carrow, DSP, stated that one of the biggest successes or failures of coordination and partnerships was the sharing of gateways and system keys. Officer Kevin Lee, Aviation Division, Philadelphia Police Department, supported this sentiment, explaining that he covered the port of Philadelphia to the Delaware coast. He said that having open gateways allowed for adding channels or talk groups in the future especially during incidents.

Network Reliability and Interoperability Council (NRIC) Addresses Industry Best Practices

A council formed by the Federal Communications Commission (FCC), NRIC was originally chartered in 1992 in the wake of major service outages. The council's

focus is the deployment and development of industry best practices to promote network reliability and interoperability.

Table 3
Key Changes Public Safety Would Like to See in the Narrowbanding Mandate

• Permit the sale and importation of 25 kHz equipment after 2008 for backward compatibility until the 2018 deadline • Continue to certify wideband equipment for use by all licensees under 512 MHz after 2005 • Allow public safety systems to continue expanding contour areas for existing wideband systems

Rechartered after September 11, 2001, the council now focuses more on homeland security to address external threats to communications infrastructures. The council consists of members from a wide variety of industry segments, including carriers, cable television, wireless, Internet service providers, equipment suppliers, and system integrators, all at the chief executive officer level.

The current charter's structure has three segments: the council, a steering committee, and focus groups. It is through the focus groups that needs assessments, gap analyses, and best practices have been documented in the form of deliverables, which can be found at www.nric.org.

The next steps for NRIC include an outreach campaign to reach beyond the member companies and to increase the awareness of the best practices and recommendations to public safety.

FCC Mandate to Narrowband Below 512 MHz Would Hinder Interoperability

This presentation, given by Mr. James Downes, Department of Homeland Security, introduced the FCC's Second Report and Order on mandatory narrowbanding technology for all spectrum under 512 MHz.

He detailed how the mandate would affect public safety if it were released officially in the *Federal Register*. Several actions would take place, including prohibition of applications for new operations that use a 25 kilohertz (kHz) channel and any modifications to expand the current contours of existing systems.

Mr. Downes explained that, as stated in the Second Report and Order, beginning January 1, 2005, the FCC would no longer certify equipment that was capable of transmitting in wideband mode. As of January 1, 2008, the order would ban the manufacturing and importing of all equipment that used the 150–174 MHz and 421–512 MHz that was capable of using a 25 kHz bandwith.

Mr. Downes then explained the negative impact these prohibitions would have on the public safety community. The initiative would impact interoperability between local, state, and federal public safety stakeholders because there would be no backward compatibility between legacy wideband equipment, and wideband equipment could not be manufactured after 2008.

Mr. Downes indicated that the most important factor was funding. In the current economy, local, state, and tribal public safety agencies could not afford to replace existing systems and equipment on such a truncated schedule. As result, they would be unable to interact until everyone sharing the band had migrated to 12.5 kHz technology.

The PSWN Program, the Federal Law Enforcement Wireless Users Group (FLEWUG), and others such as National Telecommunications and Information Administration (NTIA) were responding to the issue in several ways. The PSWN Program and FLEWUG were submitting petitions for reconsideration to the FCC, including the highlights described in Table 3.

Mr. Downes reported that Ms. Nancy Victory, Assistant Secretary of Commerce for Communications and Information, and Administrator of NTIA, was drafting a letter to the FCC explaining how the mandate was not conducive to phased implementation for migration.

Mr. Downes closed by explaining that the main reason for bringing this issue to the attention of the public safety community was to encourage the public safety community to communicate with the FCC regarding the problems associated with this mandate before it became an official release.

Next Symposium Invitation

To adjourn the symposium, Lieutenant Colonel Craig Allen, Deputy Director, Illinois State Police and PSWN Program Executive Committee member invited participants to the next symposium scheduled for Springfield, Illinois.

Lieutenant Colonel Allen expressed his sincere thanks to the PSWN Program for allowing him to invite attendees to join him at the 20th PSWN Program Symposium to be held in Springfield, Illinois, this fall.

He mentioned that Illinois' communications system, which was a public–private partnership, would be showcased at the symposium, inviting all to attend and learn how Illinois had built its unique system.

Communications Vehicles Exhibited for On-Site Public Safety Communications Interoperability

On Tuesday and Wednesday afternoon at the close of the symposium, attendees were able to explore the communications vehicles provided by the FBI and the Maryland State Police. Also exhibited but not pictured was the Department of the Treasury Inspector General for Tax Administration's communications vehicle.

One of the FBI's communications trailers.

About The PSWN Program

"No man, woman, or child should lose his or her life because public safety officials cannot talk to one another."

The PSWN Program was formed to promote effective public safety communications and to foster interoperability among local, state, federal and tribal communications systems. The original program was initiated in 1996 and comanaged by the Department of Justice and the Department of the Treasury. The program is now being co-managed by Justice and the Department of Homeland Security. With guidance from the Federal Law Enforcement Wireless Users Group and an executive committee that includes prominent local and state public safety officials, the program is addressing issues facing local, state, federal, and tribal public safety agencies as they work to improve communications interoperability.

Since the program's inception, we have promoted partnerships among public safety agencies, conducted case studies in several regions of the Nation, initiated pilot projects to test and refine interoperability solutions, addressed spectrum policy and funding issues important to public safety, and investigated issues associated with system security and standards and technology development.

The PSWN Program has actively supported local, state, federal, and tribal entities in improving public safety wireless interoperability. A few examples include—

- Launched an interactive Web site for Public Safety WINS: Wireless Interoperability National Strategy to highlight interoperability progress and solutions
- Developed pilot projects in locations nationwide to demonstrate and test interoperability solutions in actual operational settings
- Convened the PSWN Executive Committee, which comprises prominent local and state public safety officials, to provide strategic guidance and promote the need for improved communications interoperability
- Assisted in the establishment of a State Interoperability Executive Committee (SIEC) in West Virginia and Mississippi
- Published the Interoperability Solutions Map in *Mobile Radio Technology* magazine.