Title: State of Ohio “MARCS in Schools Program”

Category: Cross-Boundary Collaboration and Partnerships

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**Executive Summary**

Statistically speaking, high-profile incidents involving loss of life at Ohio schools are rare occurrences. However, the problem of school violence has drawn the attention of school officials, law enforcement agencies, and statewide leaders in recent years since highly-publicized shootings – including one at Ohio’s Chardon High School on February 27, 2012 that took the lives of three students and paralyzed a fourth.

When considering emergencies at kindergarten through grade 12 schools, colleges and universities, the issue of response time was an important component of a 2013 report issued by the Ohio School Boards Association (OSBA). The OSBA report cited examples of how the prompt response of the school’s staff and local law enforcement officials likely saved lives.

Following the Chardon incident, and in the wake of the events at Sandy Hook Elementary school in Newtown, CT that resulted in 26 deaths, state officials saw the need to provide a rapid response mechanism that would more immediately connect schools to their local law enforcement agencies by using the Ohio MARCS (Multi-Agency Radio Communications System) technology.

MARCS in collaboration with the Buckeye State Sheriffs’ Association (BSSA), Ohio Association of Chiefs of Police (OACP) and Motorola developed a radio that enables designated school personnel to immediately and silently notify law enforcement of an emergency in progress. MARCS-In-Schools (MIS), is activated by pressing a panic-like button attached to the device directly signaling local emergency responders of an emergency occurrence at the school.

Once the emergency button is pressed and the alert to the assigned responders is activated, an attached paddle microphone enables two-way communication between the school and emergency response personnel. School-specific protocols defining a school emergency for which the emergency button shall be activated are established prior to the installation of the MARCS radio. These protocols may differ from school-to-school and according to procedures established by local law enforcement agencies.

Recognition of the urgency of the need to prevent occurrences such as the Chardon and Sandy Hook incidents resulted in the development and availability of the technology. MIS, launched statewide in 2013 and is the result of a collaborative effort among state officials, municipalities, first responders and schools and has placed Ohio at the forefront in the U.S. in emergency response planning for school emergencies.

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2 Ibid., page 5

Business Problem and Solution Description

I. Problem

Each school day, our nation’s schools are entrusted to provide a safe and healthy learning environment for approximately 55 million elementary and secondary school students in public and nonpublic schools. Families and communities expect schools to keep their children and youths safe from threats (human-caused emergencies such as crime and violence) and hazards (natural disasters, disease outbreaks, and accidents). In collaboration with their local government and community partners, schools can take steps to plan for these potential emergencies through the creation of a school Emergency Operations Plan. (FEMA citation)

Emergency preparedness includes five mission areas: prevention, protection, mitigation, response and recovery. Response refers to “the capabilities necessary to stabilize an emergency once it has already happened or is certain to happen in an unpreventable way; establish a safe and secure environment; save lives and property; and facilitate the transition to recovery … response activities occur during an incident.” (FEMA)

Throughout the U.S. and Ohio schools, emergency incidents occur on an almost daily basis. In recent years, several high-profile incidents have stressed the need for quick response in order to save lives:

- On April 20, 1999 at Columbine High School, Columbine CO, two students went on a 16-minute rampage killing 13 and injuring 21. “Within 11 minutes from when the shootings began, six deputy sheriff’s had arrived outside the school, and for the next six and a half minutes, 10 more people were killed and 12 others were wounded.” (source: http://www.educationworld.com/a_issues/issues084.shtml#sidebar)
- On April 16, 2007, at Virginia Polytechnic Institute and State University in Blacksburg, VA, a student killed 32 and wounded 17 others.
- On February 27, 2012, a shooting at Ohio’s Chardon High School took the lives of three students and left another permanently paralyzed.
- On December 14, 2012, a lone shooter at Sandy Hook Elementary School in Newtown, CT, took the lives of 28 people including 20 children.

These events, among so many others, emphasized the strong sense of urgency for first responders to develop a system capable of allowing emergency responders to more quickly and efficiently reach the scene of school emergencies and to find ways to protect vulnerable school populations.

II. Barriers, challenges and opportunities

In the first potentially chaotic moments of an emergency, school officials must often provide initial emergency assistance while, assessing the situation and also
coordinating efforts with emergency responders. This can became problematic because the number of 911 calls can overwhelm the dispatch system and result in critical minutes elapsing before additional law enforcement arrives at the scene. Also, multiple reports can cause confusion over what type of emergency personnel needed to be dispatched (i.e., EMS or Police). In such emergencies, lost emergency response time can be the difference between life and death.

Schools have long had fire alarms where at the pull of an alarm fire departments are instantly notified of a fire emergency. That same functionality did not exist for other emergencies such as an active shooter.

III. Solution

In Ohio, the overall need to improve communication protocols between public safety and service agencies has been addressed by the implementation of the MARCS. The MARCS system has been fully operational since 2002 and is used by more than 1200 state, local and federal first responder agencies, as well as border areas in contiguous states. Users include fire agencies, police agencies, emergency medical service agencies (EMS), emergency management agencies (EMA), 17 state agencies, the Federal Bureau of Investigation (FBI), the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), the U.S. Border Patrol, the U.S. Fish and Wildlife Service, and the High-Intensity Drug Trafficking Area (HIDTA), part of the Drug Enforcement Administration.

The MARCS infrastructure consists of 127 state-owned towers and 80 leased-space towers, connected through T-1 lines and microwave point-to-point into core computer equipment at the State of Ohio Computer Center. Although only 8,500 mobile radios were envisioned originally, there are currently 47,500 voice units activated on the MARCS network, as well as 75 computer-aided dispatch consoles and 1,800 mobile data terminals (in-car computers).

In 2013, the Ohio General Assembly passed HB 482 authorizing an upgrade of MARCS to an IP based system. The upgrade increases current capacity to support more than 125,000 radios and provides local governments and law enforcement agencies with mission critical interoperable communications rather than create their own systems.

Through MARCS, first responders can communicate with each other but there was no mechanism for the schools to communicate instantly in response to an active shooter type event. Ohio Governor John R. Kasich along with the Ohio Department of Administrative Services, which oversees the state’s Office of Information Technology
and the MARCS program, quickly collaborated on an approach to put MARCS technology into the schools -- addressing the communications issues described above.

IV. Elements of the solution

Ohio’s 2013-14 state biennial budget, enacted and signed into law by Governor Kasich in June 2013, established the School Security Grant Program through which funds for installation of MARCS technology will be reimbursed to participating schools. The Ohio Facilities Construction Commission (OFCC) was assigned to administer the grant program, funded by a $12 million appropriation. The OFCC began accepting applications for security grants in October 2013. The non-competitive grants are structured to reimburse public and community schools for:

- Up to $2,000 for one emergency communications system or MARCS unit per eligible school building; and
- Up to $5,000 for the cost of purchasing a security entrance system, which includes a security camera, intercom and remote access equipment per building.

To date, approximately 1,400 public school buildings have applied through the OFCC for MARCS radio equipment. Installation and deployment of the radios is ongoing and scheduled to be completed by the beginning of the new school year. The 172 schools with protocols established for MARCS usage and where responder networks are in place have been installed and are working. Activation timelines for each school vary based on the development of the usage protocol – this is a joint effort between the school and local law enforcement.

V. Communications Plan

An extensive communications plan is in place to alert stakeholders (school officials, local law enforcement and civic leaders, as well as the media) about the availability of the new technology and implementation schedules for schools in all 88 Ohio counties. This plan enhances the MARCS management team that is in continuous contact with local school and emergency response officials, providing frequent progress reports and answering questions about each district’s specific systemic needs.

Significance of the Project

The development and deployment of MARCS technology has made emergency response across Ohio more efficient and effective. Before MARCS came into existence, emergency responders were often unable to communicate with each other because of a patchwork of radio networks that could not communicate across county lines. This old network presented growing challenges for responding to statewide crises.
Since the MARCS deployment, each county response unit has access to the same interoperable communications network. The MIS initiative expanded the state-of-the-art technology into the schools, providing another level of protection. The primary beneficiaries of the MIS program are more than 1.7 million public school students, 111,000 faculty members in Ohio’s 615 public school districts.4

Due to the overwhelming response to the program, on May 21, 2014 Ohio Gov. Kasich announced that an additional $17 million in grant money for school security would be made available through the OFCC. Of that total, $10 million would be allocated to further the public schools initiative, while $7 million would extend the MIS initiative to 1,047 private schools, serving approximately 246,000 students in Ohio5 (http://www.wlwt.com/news/kasich-to-seek-17m-for-ohio-school-security/26095578).

The MIS program is clearly aligned with the priorities of Gov. Kasich and other legislative leaders, who have identified school security as one of Ohio’s most pressing concerns and provides a valuable shared service to Ohio schools and first responder communities. The goals of increased funding for school safety were recently discussed by the State School Superintendent, Richard Ross, Ohio Department of Public Safety (ODPS) Director John Born, and Center for P-20 Safety and Security Executive Director Rick Amweg. The Center for P-20 Safety and Security was formed in 2013 as a collaborative effort between the Ohio Board of Regents and the Ohio Department of Education to create safe and supportive learning environments and respond to violence and its causes in educational settings throughout Ohio.

Benefits of the Project
The benefits of the MIS initiative are clearly aligned with NASCIO’s state CIO priorities for 2014. These priorities include directives to support shared services and ensure that information technologies across all levels of state government would be streamlined to operate at a peak level of efficiency, with sound strategies for containing operational costs. The MARCS program, in general, and the MIS program specifically meet these goals by:

- Specifying a clear and present need for the development of two-way communications between schools and first responders at the state administrative and legislative level; and
- Creating a centralized two-way communications system usable at every level of government.

4 Source: Derrick Meador, Ohio Education, A Profile on Ohio Education and Schools http://teaching.about.com/od/ProfilesInEducation/a/Ohio-Education.htm
5 Ibid.
The MARCS Program provides a coordination mechanism between the Ohio Department of Administrative Services’ Ohio Office on Information Technology and first responders in all of Ohio’s 88 counties. Subscribers to MARCS receive the benefit of a quick response and clear voice transmissions sent and received. The system provides mobile voice coverage throughout 97.5 percent of Ohio and a 10-mile radius and an interoperable connection between state, local and county agencies. In addition, a number of federal agencies operating in Ohio also have installed MARCS systems.

At a time when municipal budgets are tightly operated, being connected to the MARCS system helps local governments and school districts avoid the need to install stand-alone security systems and benefit from shared response and support during emergencies. At the same time, their technology needs are met by having access to state-of-the–art equipment which was built to sustain future upgrade capability.

By extending to Ohio’s public and private schools the advantage of being connected to the state’s MARCS system, the MIS project has helped develop and expand a working partnership between school districts and law enforcement agencies throughout the state. Such relationships were not clearly defined during the period before the technology was made available and has enabled schools and responders to assess each other’s emergency needs to reduce response times.

Deployment and installation of MARCS radios differs according to the protocols established by each locality. The goal of state MARCS coordinators has been to deploy equipment as quickly as possible to address future emergencies, but also to ensure that the training needs of school personnel and law enforcement are completely met so that the response systems are completely functional at the time they are introduced.

The MIS initiative is a demonstration of a collaborative effort and what can be accomplished when a serious issue, such as school security, is identified and prioritized as a clear problem with a workable solution. Ohio’s MARCS/MIS program deserves NASCIO’s recognition for leading the nation in acting promptly to make cutting-edge technology available to schools and first responders throughout the state, securing the funds necessary for statewide implementation and for developing a communications plan to inform school districts and law enforcement agencies about the options available to help them acquire and install the equipment.