**Application Brief**

**Education:**

Schools Increase Campus Security, Improve Staff Efficiency with Motorola Two-Way Radios

Educational institutions from K-12 to higher education are looking for ways to meet a range of student needs with ever dwindling funding. Parents want to know they are sending their students to a safe and secure learning environment. Teachers, coaches, bus drivers and security personnel want to more effectively oversee assemblies, sporting events and other school activities while maintenance staffs want to more efficiently manage day to day activities. And administrators want to ensure a rapid, coordinated response to any situation using technology that is within their budgets.

The case for two-way radios

A common thread that links these challenges together is the need for effective communication. Two-way radios help address rising safety concerns from the classroom to the bus stop to the football field. Whether drivers need to report a broken down vehicle, security needs to notify teachers of an emergency or maintenance needs to be reached for a broken water pipe, two-way radios help keep staff connected.

Education + Security = Motorola Two-way Radios

Motorola is a company of firsts with a rich heritage of innovation that connects people, delivers mobility and makes technology personal. Versatile and powerful, Motorola two-way radios are the ideal communication solution for schools and educational institutions.

Combining flexibility with enhanced functionality, Motorola CP Series portable radios and CM Series mobile radios meet a range of needs from coverage over a wide area to emergency notification. And Motorola's MOTOTRBO digital two-way radio system offers enhanced features, increased capacity, integrated data applications such as dispatch and location tracking, exceptional voice quality and extended battery performance. Motorola two-way radios can help keep students safer, staff more efficient, and costs lower.

Here's how:

**Situational awareness**

Technology is becoming a crucial component in securing school campuses and increasing safety. Motorola two-way radios provide constant and reliable communications between teachers, staff, maintenance, the security team and school bus drivers, helping to head off potential threats and maintain heightened security throughout and around the campus.

**Increased campus safety & security**

Motorola radios provide a host of ways to increase security throughout the schools.

- When disturbances or emergencies occur, teachers, bus drivers, crossing guards and coaches can take immediate action via the radios’ emergency call features to quickly alert a safety or security team.
- Using MOTOTRBO radios, security staff can program radios to receive an alarm text message when an emergency door is opened, wherever they are throughout the coverage area.

A huge windstorm hit the town of Sedro-Woolley in Washington State, leaving an elementary school located 13 miles from the school district office without power. With the push of a button, office staff immediately reported the problem to the district office.

"With the MOTOTRBO radios, the school district is ready for any situation, whether it’s a day-to-day problem like a water pipe break, or an emergency situation that requires medical or security assistance."

– Stewart Mhyre, Executive Director of Business and Operations, Sedro-Woolley School District, Washington

**Transmit interrupt capability** overrides lower priority conversations to deliver urgent messages during an emergency.

**When voice communication isn’t feasible**, teachers or bus drivers can use MOTOTRBO radios to send discreet text messages, ensuring students and bystanders don’t overhear.

**The built-in voice scrambling of CP Series radios and the enhanced privacy of MOTOTRBO radios** prevents unauthorized listeners from hearing communication among school staff.

**Location tracking that enhances security**
Ideal for tracking the location of school buses, campus shuttle buses and security personnel, an an integrated GPS modem in MOTOTRBO radios allows school officials to track the location of school vehicles in case of emergencies and to easily track the whereabouts of each bus enroute to or from the schools.

**Tools for operational efficiency**
CP Series portables, CM Series mobiles, and MOTOTRBO two-way radios can help schools efficiently supervise bus loading and unloading as well as manage large assemblies, cafeteria busy times and sporting events, both large and small. Work order ticket applications for MOTOTRBO radios enable maintenance personnel to receive and complete work orders without having to return to the main office. Using dispatch and location tracking applications, staff can quickly locate and send the nearest security officer to a specific location on campus. Additionally, headsets and earpieces enable staff to listen and talk hands-free. The result is a more efficient staff throughout the campus.

**Remote control of activities**
The digital technology of MOTOTRBO radios accommodate a number of telemetry applications that enhance security and increase productivity. Security or administrative personnel can be automatically notified if a gate or door is opened or closed without authorization and can then remotely open and close it. Maintenance personnel can turn lights on or off, control sprinkling systems and perform other tasks directly from the radio.

**Easy to use**
Motorola’s CP Series portable radios are lightweight and compact enough for use during the busy school day but are durable enough to withstand the rigors of constant knocks and drops. CM Series mobile radios enable quick access to communications for your security, maintenance and bus/shuttle drivers, even when in their vehicles.

**Clear audio even in noisy environments**
Whether it’s a kindergarten class or a college campus, schools can sometimes be noisy places.

Motorola’s exclusive X-Pand™ technology in the CP/CM Series radios, delivers crisp, clear audio that ensures message are heard, even through the noise. MOTOTRBO digital radios have additional noise-cancelling technology that helps block background noise, sending only the voice transmission to deliver crisp, clear audio that prevents misunderstood messages.

**Campus-wide coverage**
Wireless communications can sometimes come up against physical obstacles and terrain that are difficult to overcome and can result in communication coverage gaps and dead spots. Digital MOTOTRBO radios and repeaters help your staff communicate throughout the school grounds, in spite of trees and hills, and even throughout basements and tunnels.

**Remote campus connectivity**
Using your existing Internet connection, MOTOTRBO IP Site Connect links remote sites together, regardless of where they are in the city, state, country, or even overseas. “With MOTOTRBO and IP Site Connect, coverage has improved across our three campuses,” says the director of security of a multi-campus institution in New York. “In fact, two of our campuses are about 47 miles apart and we could never talk with them via two-way radio before. Now, it’s like we’re talking on the phone.”

**Extended battery life**
School days don’t end at 3:00 for many school employees and neither should their radio batteries. For longer shifts or unusually heavy use, high capacity Li-ion batteries provide extended talk time. With the digital technology of MOTOTRBO radios, battery life is up to 40% longer between recharges compared to typical analog radios. To prolong the life of your batteries and maximize talk time, Motorola’s state-of-the-art IMPRES technology automates battery maintenance so your radios are ready to go whenever you are.
As the campus began to expand throughout several blocks of a residential neighborhood, security for North Park University became even more challenging. Located on Chicago’s north side, the university equipped its security staff with MOTOTRBO radios for uninterrupted coverage from the athletic field and residential halls to the security escort service that operates up to a mile off campus.

“Universities are in the people business and we have to sell the safety of our campus. MOTOTRBO provides reliable communications that help us keep our campus safe.” – Dan Gooris, Director of Campus Security, North Park University, Illinois

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With Motorola’s flexible, comprehensive portfolio of two-way radios, you can choose the right solution that fits your institution’s exact needs.

Accessories that just make sense
No matter which radio you choose, Motorola has designed a flexible, versatile portfolio of accessories that extend the value and usability of its two-way radios.

- **Remote Speaker Microphones** enable easy access to radio communications for security personnel, without having to remove the radio from their belt

- **Lightweight headsets** used during loud events, such as assemblies, concerts and sporting events, enable users to hear audio transmissions clearly, while keeping their hands free

- **Carry cases and belt clips** enable staff to keep their radios with them at all times, while not getting in the way as they go about their day

- **Control station accessories** such as a desktop microphone, tray and external speaker, allow the school office staff and administration to convert mobile radios into simple control stations for dispatching buses and shuttle buses

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**CP Series Portable Radios**
A light, compact design, crisp clear audio and accessories that enable hands-free communication, the CP Series of portable radios allow administrators, educators and staff to work as a cohesive team to maintain order and safety. CP Series radios feature a large, textured push-to-talk button, X-Pand™ technology for crisp, clear audio and programmable buttons for quick access to frequently used features. And the CP200•XLS features advanced capabilities and capacity for a large workforce, including LTR analog trunking capability, an eight-character display and limited or full keypad models. The radios also have built-in simple voice scrambling for enhanced security, preventing those listening on a scanner to eavesdrop.

**CM Series Mobile Radios**
Perfect for your mobile staff who operate security vehicles, school buses and courtesy transport vans, Motorola’s CM Series mobile radios’ ergonomic features enable easy operation, even in distracting environments. CM200 mobiles feature a numeric display and two programmable buttons. CM300 mobiles offer additional features such as an eight-character display, additional signaling capabilities and four programmable buttons. A built-in, powerful four-watt speaker enables greater clarity, even over the noise of a crowded school bus. Microphone and controls are located closest to the driver for easy reach and bright visual indicators can be read at a glance, helping drivers keep their eyes on the road.

MOTOTRBO Digital Two-way Radio System
MOTOTRBO digital radios offer a number of advantages over analog in certain situations. Digital technology enables clearer audio for noisy environments and extended battery life for long work shifts. The ability to employ a variety of integrated data applications can increase security and productivity. For example, text messaging allows discrete communication and GPS-based location tracking can identify the location of school buses. Work order ticket management can speed response and improve efficiency of the maintenance team. Additionally, MOTOTRBO radios let you double the number of users without adding a second repeater, saving you equipment costs.

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MOTOTRBO meets FCC mandate for 12.5 KHz

To increase spectrum efficiency and accommodate more users, the FCC is mandating 25 kHz licensees to operate using 12.5 kHz efficiency by January 1, 2013. MOTOTRBO digital radios offer a seamless path to 12.5 kHz, allowing customers to transition at their own pace.

Scalable communications that fit your needs now and in the future

With a long history providing communications solutions that enable mobility and provide access to seamless communications, Motorola understands that not every agency is alike and not every agency uses the same technology. That’s why Motorola developed a portfolio that allows you to choose the system that provides the exact coverage, capacity and features you need for your operation to service your constituents at peak efficiency now and lay the foundation for migration to new technology when the time is right.

MOTOTRBO is built to the globally recognized Digital Mobile Radio (DMR) standard; DMR is widely backed by major manufacturers of digital professional two-way communications equipment. So with MOTOTRBO, you can be assured that you are getting a robust and future-ready digital radio solution.