



DES MOINES PUBLIC SCHOOLS SECURES INSTANT COMMUNICATIONS ACROSS THE DISTRICT

MOTOTRBO™ DIGITAL RADIOS EXCEL IN UNIFYING BUILDINGS, BUSES AND SECURITY



Across the nation, 99 percent of K-12 educators say that improving safety and security is their number one priority; nearly 40 percent believe their district needs an updated communication system, especially for emergencies. More than 40 percent want GPS to track and monitor their buses¹. Yet at least 34 states have less funding per student for the 2013-14 school year than before the recession².

Des Moines Public Schools (DMPS) is the largest provider of public education in Iowa. More than 32,000 students and nearly 5,000 teachers and staff populate its 65 schools. This vibrant capital city ranked fifth in the nation as “best place to raise a family”, in part due to its school system³.

Like so many districts trying to tighten security on tighter budgets, DMPS sought an effective way to connect all schools, improve emergency response communications and efficiently track buses. They discovered that MOTOTRBO digital radios with voice and data were an exceptional choice.

CUSTOMER PROFILE



- Largest public school district in Iowa
- 32,000+ students, 5,000 teachers and staff, 65 schools

MOTOROLA SOLUTION

SCHOOL COMMUNICATIONS

- MOTOTRBO™ XPR™ 6550 Portable Radios
- MOTOTRBO XPR 3300 Portable Radios
- MOTOTRBO XPR 8400 Repeaters
- MOTOTRBO IP Site Connect
- Surveillance Kit Earpieces
- IMPRES™ Remote Speaker Microphones

BUS COMMUNICATIONS

- MOTOTRBO XPR 4350 Mobile Radios
- MOTOTRBO XPR 4550 Mobile Radios
- MOTOTRBO XPR 8400 and MTR 3000 Repeaters
- EDULOG EduTracker Software
- Tallysman Sprite™ Tracking Modules
- CTI TurboVUji™ Dispatch Console

SOLUTION FEATURES

- Unified, private communications district-wide
- Virtually 100% coverage for fast emergency response
- Real-time tracking and efficient management of buses
- No monthly fees or recurring costs

THE CHALLENGE

CONNECT ALL SCHOOLS, ALL ACROSS THE DISTRICT

Previously, DMPS used older analog radios which limited their communications to each building or campus. Even worse, the new reflective insulation materials designed to make their buildings more energy-efficient blocked radio signals and degraded coverage. While individual schools could talk among themselves, communications across the district were insufficient and inefficient.

According to Kevin Bailey of Electronic Engineering, a local Motorola channel partner, the FCC narrowbanding mandate spurred DMPS to upgrade to digital radios. "Our objective was to connect them district-wide for security and safety purposes, so they had a clear, comprehensive and more robust network."

COMMUNICATE WITHOUT THE SHORTFALLS OF CELL PHONES

Communications for DMPS security were fragmented too. Even though security officers had mobile radios in their vehicles to talk with dispatch, they used cell phones when patrolling on foot. "The administration knew that you have recurring costs forever with cell phones," explains Kevin Bailey. "Also, most security people have been trained in public safety and know that using a cell phone when you really need somebody is not an option. You don't have time to dial; you need to push a button and talk."

"Cell phones were not a consideration for our school buildings either," says Douglas Mundil, DMPS Telecommunications Manager. "Cell phones are one-to-one communication and with two-way radios, you have instant communication to the whole team. If there is an emergency, all the appropriate people have a digital radio, so everyone is on the same page."

DMPS knew that having a private network with a lower total cost of ownership was a smart move – unlike cell phones which cost up to 50 percent more over five years⁴. "A digital radio system is a one-time cost, not a recurring fee like cell phones," Mundil says. "That was very important to our district. We don't need ongoing expenses to have district-wide communication."



TRACK BUSES, IN REAL TIME, ON EVERY ROUTE

For years, transportation at DMPS relied on EDULOG software to plan bus routes. However, they could not track their fleet of 120 buses moving 10,400 students on 758 runs each day, including over 100 school-to-school shuttles transporting another 1500 students.

At that time EDULOG's GPS solution was a cell-based offering. Motorola, EDULOG and DMPS recognized the benefits of radio-based GPS solutions and teamed up with Tallysman so DMPS could track the fleet using their MOTOTRBO radio system and EDULOG's EduTracker software. "Cell phones were not an option," says Kevin Bailey of Electronic Engineering. "Their administration was adamant. They wanted a safe choice with zero recurring costs."

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– Douglas Mundil, Telecommunications Manager, DMPS

THE SOLUTION

MOTOTRBO RAISES THE STANDARD OF COMMUNICATION

Electronic Engineering has worked closely with DMPS, first with analog radios and now to upgrade to digital. “Electronic Engineering told us about MOTOTRBO. We came up with a plan to switch over and they helped us immensely,” says Mundil. “We used several security grants along with funds set aside for narrowbanding.”

With the migration to MOTOTRBO digital radios and IP Site Connect, every security person has a radio instead of a cell phone and the district has almost 100 percent coverage, exceptionally clear audio and GPS tracking of buses. “We have MOTOTRBO digital radios in every one of our school buildings, in security, and in every school bus. We have eight linked repeaters so we have total coverage. Now everyone in our district can communicate together,” says Mundil.

“Another very important benefit of MOTOTRBO is having a private network. When we had analog, it was all or nothing. We can also send individual texts to MOTOTRBO radios, so we’ve gained private as well as district-wide communication.”

GREATER SAFETY RIDES ON MOTOTRBO GPS TRACKING

With the district’s move to digital, the transportation department used the opportunity to purchase MOTOTRBO radios as well. Working together with Motorola, EDULOG and Tallysman, DMPS integrated the bus planning portion with the GPS tracking capabilities

of MOTOTRBO radios. “What we’ve done with the digital radios is the first in the nation,” says Kevin Williamson, DMPS Transportation Specialist.

Now DMPS can be specific and accurate about the movement of their entire fleet based on the information provided by EDULOG EduTracker software. “I can see when a bus starts up, the times and schedule of stops. If I make changes to a route, it’s automatically transferred to the GPS, so it’s ready to go. I instantly know if a bus is running behind, the estimated arrival time, and when the bus door opens. When a major snowstorm hit as students headed home, I could tell parents exactly where each bus was,” says Williamson.

MAXIMIZES FLEET EFFICIENCY AND MINIMIZES SPENDING

With MOTOTRBO and EDULOG EduTracker, DMPS can access real-time and historical data, confirm routes and speeds, know if a driver has missed a stop or is idling – ultimately utilizing their assets more efficiently. “If we can take a bus or two off the road, we’ll save \$25,000 a year or more. We can reduce hours by better managing our fleet and that can reduce thousands of dollars. This solution will pay for itself in a short period of time,” Williamson says.

“This is leading the way to the next generation of fleet management. The initial cost is so minimal, and when you compare it to recurring cellular costs and how it improves the safety of our students, I urge other districts to look at it.”

“Now as our security personnel move around the district, they have total communication because of MOTOTRBO. It’s all about making sure everyone can communicate the moment they need to.”

— Douglas Mundil,
Telecommunications Manager, DMPS



THE BENEFITS

TIGHTER SECURITY AND FASTER EMERGENCY RESPONSE

"In the past, when there was a shooter or threat, we could either send out a district-wide emergency message and alarm all schools or try to reach someone on the phone. With MOTOTRBO digital radios and the TurboVUI Dispatch Console with voice capability, it will be completely different," says Pamela Rosa, DMPS Safety Compliance Specialist.

"We can now call an individual school and specific radio, and security and staff can privately call or text on the radios. The dispatch console takes all of the digital radio capabilities to a new level of efficiency which improves emergency response," she adds.

"The beauty of this system is our ability to radio every MOTOTRBO XPR 6550 and XPR 3300 in a school and tell them to lock down. That is incredibly more effective than trying to get someone to answer a phone after hours. If we have ten radios in that school, all ten people can hear us. If we call a cell phone, that person needs to get off their phone and then radio everyone. We're skipping a step with MOTOTRBO and saving critical time."

INSTANT, ACCURATE INFORMATION TO STAFF AND DRIVERS

"MOTOTRBO has definitely given us the increased ability to communicate with our schools in an emergency," says Pamela Rosa. "We can not only speak to personnel in the buildings, to security and local law enforcement, but we can speak directly to the buses. We didn't have that capability with analog radios."

SOURCES

- 1"K-12 School Communications Report Card," 2013 Nationwide Education Survey, Motorola Solutions
- 2"Most States Funding Schools Less Than Before the Recession," Center on Budget and Policy Priorities, Sept. 12, 2013
- 3"2011 Best Cities for Families," Parenting Magazine
- 4"Field Mobility: Investment Acumen for Next Generation Mobile Solutions," VDC Research, October 2013

To secure instant communications across your district, visit www.motorolasolutions.com/MOTOTRBO or contact your local Motorola representative.

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– Pamela Rosa, Safety Compliance Specialist, DMPS

With the addition of the TurboVUI Dispatch Console, the district can also record and replay all radio traffic and identify the exact radio, school and bus. "This console tied in with the radios is critical so everyone has the right information, without giving too many people too much. MOTOTRBO has the right balance and we are really excited about the ability to provide and receive accurate information quickly," she adds.

SAFETY FIRST, NOW AND DOWN THE ROAD

"In this day and age you have to step it up, and MOTOTRBO is invaluable," says Rosa. She is urging the district to add the CTI TurboVUI phone app so everyone who needs to make a decision, such as on a reunification plan, can jump on one call.

The transportation office is also exploring a RFID solution which leverages MOTOTRBO radios to track students with EDULOG EduTracker software. "I will have a list of students at a stop and know immediately whether they boarded that bus or not, who was picked up, dropped off or missed," Williamson says.

"Security is our main goal – to make sure every student is safe, gets on the bus safely, is safe in school and arrives home safely," emphasizes Douglas Mundil, "and MOTOTRBO is a great system that has helped us do it."

