



ALABAMA SCHOOL DISTRICT DRIVES GREATER SAFETY ACROSS THE COUNTY

MOTOTRBO™, WAVE™ 3000 AND GPS UNIFY BUSES AND PERSONNEL SEAMLESSLY



CUSTOMER PROFILE

Elmore County Public Schools

- 11th largest county school system in Alabama
- 14 schools, over 11,000 students and 1300 personnel

MOTOROLA SOLUTION

- MOTOTRBO XPR™ 7550 Portable Radios
- MOTOTRBO XPR 5550 Mobile Radios
- MOTOTRBO GPS Tracking Application
- Tallysman™ Server for GPS
- WAVE 3000 Work Group Communications
- MOTOTRBO Connect Plus Commercial Network

FEATURES

- Unified, private communications district-wide
- Instant, efficient group calling
- Seamless connectivity between different networks and devices
- Real-time bus tracking with 2-minute updates and ping capability

Educators nationwide are virtually unanimous in their desire to improve K-12 school safety. Ninety-seven percent say it is their top concern; almost 60 percent express the need for an updated communication system and 44 percent want GPS tracking to monitor their buses.¹ Elmore County Public Schools not only shares these priorities, their Superintendent led the way in upgrading their communication system in time for the 2015-2016 school year.

Spanning a rural region outside Montgomery, Alabama, Elmore County Public Schools is the one of the fastest-growing school systems in the state. The district oversees 14 schools – 6 elementary, 4 middle and 4 high schools – and is responsible for more than 11,000 students and 1,300 personnel.

Elmore County Public Schools sought a better way to connect their schools and bus fleet to improve student safety and accountability. They discovered that MOTOTRBO digital radios operating on the MOTOTRBO Connect Plus commercial network were the right solution for their needs. Two important MOTOTRBO applications – GPS tracking and WAVE 3000 – efficiently tracked their fleet and extended the reach of their digital radios to non-radio users.

THE CHALLENGE

Find A Better Solution Than Push-To-Talk Cellular

Elmore County Public Schools relied on push-to-talk cell phones to communicate with their fleet of 151 buses traversing the county each day. They were very unhappy with the limitations of cellular as their Transportation Coordinator, Ray Mullino, explains. "Each bus driver had a cell phone and we were having a number of issues. Drivers would leave their phones in their cars, purses or homes. They would tell us the battery wasn't charged, they weren't getting a good signal, or they didn't have time to stop the bus to make a call."

"There wasn't any form of communication between a driver to driver or between drivers and schools. They would have to pull the bus over to the side of the road, open their phones and scroll through over 50 contacts until they found the individual or school. It was another reason why we were looking for a more effective way to communicate across our entire system."

Connect Directly, Even In Schools Without Coverage

Cellular coverage was non-existent inside school buildings in the northern part of Elmore County. Because of the thick brick construction and multiple walls, personnel could not use their smartphones indoors. Principals and staff had to use landline phones to call a supervisor; they were not able to talk with a bus driver or group of drivers directly.

If a child needed to be located or a parent contacted the school about a late bus, the process involved a time-consuming series of phone calls. "Even where we had cellular service, it was poor because of the hilly terrain," says Ray Mullino. "When a school called us, you would hear bits and pieces of conversation."

Keep Track Of Every Bus, On Every Run

Beyond clarity and coverage issues, Elmore County Public Schools wasn't able to efficiently track their fleet transporting thousands of students from five different communities. So if a resident called about a speeding bus or a driver needed to be redirected, the district didn't have the real-time information to act immediately.

"We also have substitute drivers, as many as 15 a day, who operate our buses and may not know the routes or the children," says Ray Mullino. "We wanted to have a way to monitor them on routes and provide directions as needed."

THE SOLUTION

MOTOTRBO Digital Clearly Goes The Distance

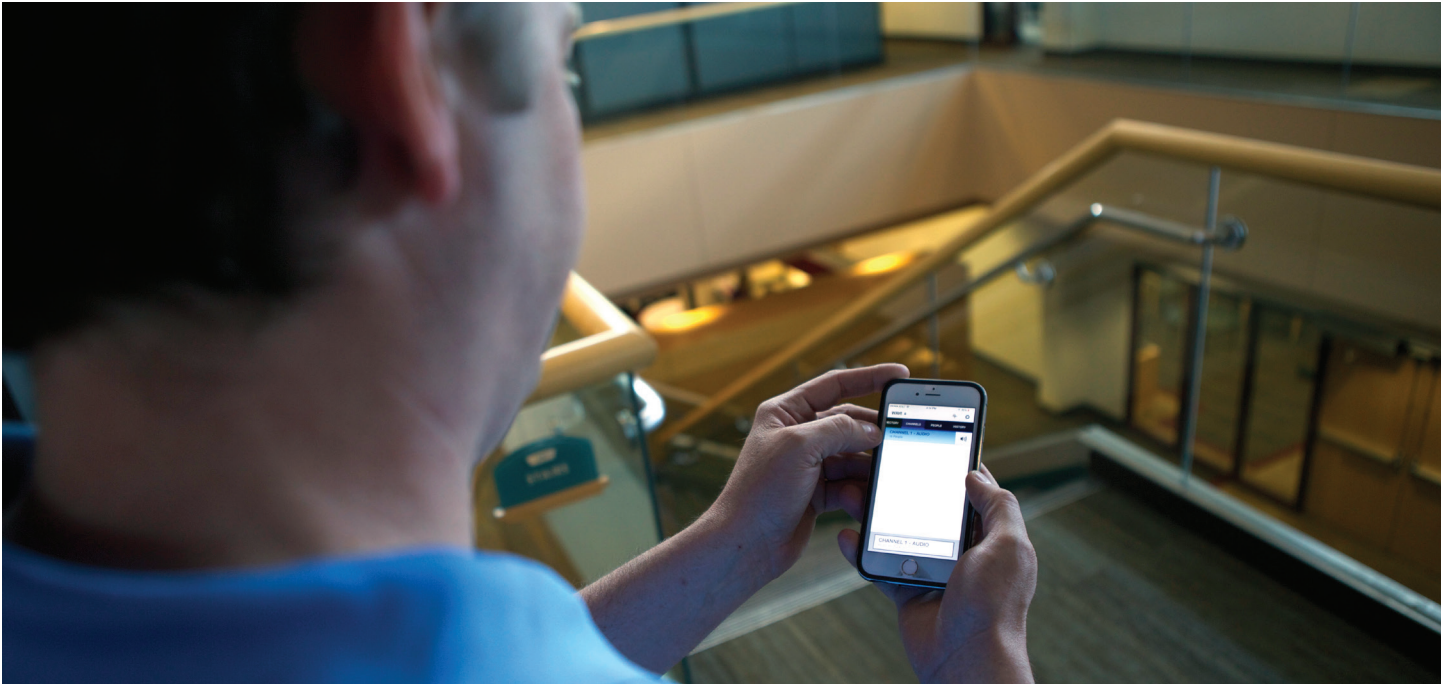
After discussing the advantages of digital with Elmore County Public Schools, David Darden, General Manager of the Allcomm Wireless, Inc. Montgomery Branch, gave them MOTOTRBO XPR 5550 mobile radios and MOTOTRBO XPR 7550 portable radios to demo. "I encouraged them to drive all over the county and test them everywhere," he says. "I told them to take it to the max with MOTOTRBO because the radios are going to perform exactly as they are now."

Both the Superintendent, Dr. André Harrison, and Ray Mullino were certified bus drivers and well-acquainted with the limitations of push-to-talk cellular. After the demo, they were impressed by the uninterrupted coverage, audio quality and long battery life of Motorola digital technology. "What amazed me was how clear communications were, wherever our drivers and mechanics went, and how easy it was to handle the radios," says Dr. Harrison. "After doing the demo, I was sold."

"One of the biggest improvements I noticed was clarity of voice. With MOTOTRBO digital radios, it is like you are talking to a person right next to you."

Ray Mullino,
Transportation
Coordinator,
Elmore County
Public Schools





WAVE Connects MOTOTRBO Radios To Smartphones

For the schools in northern Elmore County that didn't have cellular or radio coverage, but needed to talk with MOTOTRBO radio users, Allcomm Wireless installed WAVE 3000. This broadband push-to-talk solution from Motorola connects MOTOTRBO radios to non-radio users with an app installed on their smartphones.

Since today's smartphones can connect across both cellular and Wi-Fi networks, the WAVE mobile app allows school personnel to communicate with individual buses or groups of buses over MOTOTRBO radio channels. "Anywhere inside the building, anywhere they go on their own Wi-Fi, school personnel can communicate with radio users through WAVE," explains Darden. "When they go outside, their smartphones switch from Wi-Fi to the cellular carrier. With WAVE, connectivity is seamless."

"WAVE really expands the reach of our portable and mobile radios," says Dr. Harrison. "Where we had lack of coverage, it has opened up a new door because it connects different devices to our MOTOTRBO radios throughout the county. The app is very easy to use and the communication is very clear."

GPS Pinpoints Where Personnel And Assets Are

MOTOTRBO XPR 5550 mobile radios were installed in each bus with GPS location tracking that updates every two minutes. Wherever the fleet travels — north to Huntsville, Alabama or east to Atlanta, Georgia — drivers communicate instantly and are monitored over the wide-area MOTOTRBO Connect Plus commercial network owned and operated by Allcomm Wireless, Inc. "We are blanketing them with coverage wherever they go. It is as close to seamless as two-way radios get," says David Darden.

"We love the GPS capability," says Dr. André Harrison. "If we need to find out if a student is on a bus, we can do that right away. I see exactly where every bus is, at any point in the day, including our special route buses. If someone calls and says a driver was going 65 miles per hour, we can play it back and see exactly where the driver was and the bus speed. It gives us instant accountability of our drivers and fleet."

"We also have GPS on the MOTOTRBO portable radios our mechanics and shop personnel use," says Ray Mullino. "It offers real accountability by leaving a breadcrumb trail. Every two minutes, I can see their location, tell where they've been and how long they've stopped."



"WAVE really expands the reach of our radios to other devices and networks. The app is very easy to use and the communication is very clear."

Dr. André Harrison, Superintendent, Elmore County Public Schools

THE BENEFITS

Instant, Safe Conversations With Drivers

Now with the press of a button, bus drivers can talk to each other, their supervisors and schools instantly. No longer do they have to pull off the road, interrupt routes and disrupt their schedules. This is much safer than cell phones, explains David Darden, as two-way radios are not restricted by the U.S. Department of Transportation for commercial motor vehicles.

Private Calls And Efficient Group Collaboration

"In the past, we were not able to have a one-to-many conversation, it was strictly one to one. With MOTOTRBO, we can call everyone at once, call a particular community or call a driver privately and have a conversation instantly," says Ray Mullino.

The ability to streamline communications with group calling creates greater efficiency. "If a child goes to her stop on Monday, her grandmother's stop on Wednesday and day care on Friday, we make one announcement and all parties hear it. We don't have to make three different phone calls. MOTOTRBO has really simplified the process and eliminated inefficiency," he says.



Greater Accountability And Cost-Savings

From personnel accountability to fuel savings, Elmore County Public Schools is experiencing the many benefits of unified communications. "We've actually cut our monthly costs in half with MOTOTRBO radios that integrate GPS," says Ray Mullino. By using radios on a commercial system with affordable monthly airtime, they get extensive, clear coverage without the cost of radio licenses, towers and infrastructure.

"The GPS on each bus tells us the shortest or fastest route and if you're not on it, it will show you a better one," he adds. "I can tell from the data whether our drivers are on the same street multiple times a day and determine if that is necessary and fuel efficient."

"The MOTOTRBO digital system is essential for the safety of our children, our accountability to taxpayers, and the clarity and reliability of our communications. We can show how we are responsible to the public and that is very important," emphasizes Dr. André Harrison. "The cost was reasonable and the process was almost a no-brainer. I am amazed at what MOTOTRBO radios are doing for our bus drivers and school system in such a short time."

"We have GPS in our MOTOTRBO radios for our buses, mechanics and shop personnel. It provides real accountability by leaving a breadcrumb trail we can follow and review."

Ray Mullino,
Transportation
Coordinator,
Elmore County
Public Schools

Source: ¹ 2015 Study: Communication Trends Shaping K-12 School Safety, Motorola Solutions

To drive greater safety for your school district, visit www.motorolasolutions.com/education or contact your local Motorola representative.

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