



# DALLAS COUNTY SCHOOL DISTRICT OVERCOMES COVERAGE GAPS WITH MOTOTRBO™ DIGITAL RADIOS



**With its new MOTOTRBO digital radios and IP Site Connect, Dallas County School District Bus Drivers Have Access to Nearly 100% District-wide Coverage.**

## SITUATION

**Coverage gaps throughout the county frustrated drivers and compromised student safety, prompting Dallas County R-1 School District to look for a better solution.**

Large hills, deep valleys and densely wooded areas throughout the 543 square miles of Dallas County created numerous coverage gaps that prevented bus drivers from staying in contact with the district's Transportation Office, District Office and with the schools themselves. Even when drivers were able to get a connection, often the audio was so poor they had to repeat themselves multiple times. The district began looking for a two-way radio system that would keep them in constant touch with drivers and help ensure student safety.

## SOLUTION

**MOTOTRBO digital two-way radio solution and IP Site Connect enables nearly 100 percent coverage throughout the district.**

The district installed a MOTOTRBO digital two-way radio solution with IP Site Connect for greater connectivity and expanded coverage throughout the district. IP Site Connect enables drivers to roam throughout the

coverage area with no manual intervention, reducing driver distraction, increasing driver safety and eliminating coverage gaps.

## RESULTS

**With expanded coverage, clear audio and private communications, the district has improved student safety, reduced driver frustration and increased efficiency.**

With nearly 100 percent coverage available throughout the district, drivers no longer have to stop on top of a hill to find a signal. Crystal clear audio ensures that messages get through the first time and reduces the opportunity for error. And with MOTOTRBO's built-in scrambling capability, scanners can no longer pick up transmissions, preventing eavesdropping and potentially risking student security.

### CUSTOMER PROFILE:

#### Users

- Bus Drivers, Transportation Office, District Personnel, School Administration

#### Motorola Solution

- MOTOTRBO XPR™ 4350 Mobile Radios
- MOTOTRBO XPR™ 6350 Non-Display Portable Radios
- MOTOTRBO XPR™ 6550 Display Portable Radios
- MOTOTRBO XPR™ 8300 Repeaters
- MOTOTRBO IP Site Connect

#### Solution Features

- Greater coverage increases student safety
- Driver efficiency reduces fuel cost
- Crystal clear audio reduces radio traffic and eliminates busies

## CASE STUDY

DALLAS COUNTY R-1 SCHOOL DISTRICT, MISSOURI

# COMMUNICATIONS RELIABILITY IMPROVES STUDENT SAFETY

With analog radios providing spotty coverage at best, Dallas County School District bus drivers were often forced to stop on top of a high hill in order to communicate with the Transportation Office. When they did get through, the audio was nearly unintelligible, forcing drivers to repeat themselves multiple times. Migrating to MOTOTRBO digital radios with IP Site Connect has resulted in nearly 100% district-wide coverage, along with crystal clear audio capability that increases student safety and eliminates driver frustration.



MOTOTRBO XPR™ Radios

## HILLS, VALLEYS, TREES AND DISTANCE CREATE SERIOUS COVERAGE GAPS

Nestled in the heart of the Ozarks of Missouri, the Dallas County R-1 School District offers a wide array of educational opportunities to nearly 1,800 students attending its five K-12 schools. Although the Ozark Mountain region represents some of the most beautiful scenery in the country, the steep terrain, tree covered hilltops and large expanse of this rural county made busing the children to and from school both necessary and challenging. With 543 square miles in the county, the school district's 40 buses travel over 2,300 miles per day, relying on analog two-way radios to communicate between the buses and the district transportation office when out on the routes. However, that solution was not optimal.

"Because of all the hills and valleys, there were huge portions of our service area where the bus drivers were unable to contact us," says Dr. Jon Turner, Assistant Superintendent, Dallas County School District. "In certain locations of the county where communications were especially difficult, they would have to stop the bus on top of a hill where they could get a signal in order to reach the central office."

Even when drivers were able to get through, audio quality was very poor and they were forced to repeat themselves multiple times in order to be understood. This created more radio traffic, which tied up the channel, resulted in frequent busies and frustrated both drivers and district staff. Turner decided it was time to look for a better, more reliable communications solution and contacted a local Motorola channel partner to discuss options.

**"When schools are making a sizeable investment, a marginal improvement may not justify the expense. The greatly extended coverage and significantly improved voice quality of the MOTOTRBO radios have undeniably proven that they were worth the investment."**

Dr. Jon Turner, Assistant Superintendent, Dallas County School District

## CASE STUDY

DALLAS COUNTY R-1 SCHOOL DISTRICT, MISSOURI



**“The MOTOTRBO coverage is just exceptional and drivers have come to rely on their radios as their primary form of communications back into the district, increasing efficiency and reducing transportation costs.”**

Dr. Jon Turner, Assistant Superintendent, Dallas County School District

### **NEARLY 100% COVERAGE THROUGHOUT THE DISTRICT WITH CRYSTAL CLEAR AUDIO**

“The thing we noticed right away was the unbelievable quality of the sound,” says Turner. “We not only were able to understand what people were saying, it cleared up our radio traffic because we no longer had to repeat everything multiple times.”

Prior to the new communications system, if a bus would break down in a certain part of the county where coverage was unavailable, bus drivers would often have to flag down someone passing by on the road to ask if they could call the transportation office to let them know about the situation. With the solution in place, bus drivers now have access to nearly 100% coverage wherever they are within the district.

“We were very blessed that we never had an accident or serious situation,” says Turner. “But it gives you a great feeling of comfort with these new radios that within every portion of our service area, we now have the capability to communicate with our main locations in Buffalo.”

### **PRIVATE COMMUNICATIONS PREVENT EAVESDROPPING**

As any administrator knows, small events can get blown out of proportion when casual listeners don't have all the facts. On October 31, 2008, lightning struck a tree where several students were standing, leaving one with minor injuries. When school administrators and security officers used the old analog radios to coordinate response, communications were also inadvertently broadcast out to scanners.

“So many people tried to call the school, the phone system shut down,” says Turner. “So they began showing up at the campus wanting information. We have an obligation to care for the kids and communicate first with the parents but the way the information got out deterred our response and impacted our ability to efficiently manage the situation.”

The MOTOTRBO digital radios have built-in scrambling capability to block unauthorized access and enable private communications, ensuring greater safety for students and greater security for the campus.

### **Accessories tailored to your needs**

From IMPRES™ Smart Energy System batteries and chargers to Motorola Original® mobile and portable speaker microphones and carry accessories, Motorola offers the entire package that lets you take full advantage of your MOTOTRBO communications solution.

## CASE STUDY

DALLAS COUNTY R-1 SCHOOL DISTRICT, MISSOURI



### JUSTIFYING THE EXPENSE WHEN BUDGETS ARE STRETCHED

With ever-tightening budgets, schools have to justify every expense carefully and make sure that the return is worth the investment. While the district had never faced an actual crisis where unreliable communications seriously hampered the safety of its students, the potential was too great to ignore.

“If we were ever to have an emergency in the county, we needed the ability to communicate immediately with all of our schools, all of our buses, and not have to worry about the quality of the communications system,” says Turner. “When schools are making a sizeable investment, a marginal improvement may not justify the expense. The greatly extended coverage and significantly improved voice quality of the MOTOTRBO radios have undeniably proven that they were worth the investment.”

**Learn how you can benefit from MOTOTRBO**  
**[www.motorola.com/mototrbo](http://www.motorola.com/mototrbo)**  
**1-800-367-2346**

### NEXT STEPS:

Eventually, when budget allows them to make further investments, the Dallas County School District hopes to leverage the GPS-capable MOTOTRBO radios by deploying location tracking software to monitor the location of each of the school buses in real-time.

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