TITLE USING MOBILE VIDEO SYSTEM DEPLOYMENT AS FIRST LINE OF DEFENSE

TEASER

Canyons School District

Large Utah School District equips bus fleet with open platform, mobile video surveillance for student safety and incident investigation.

CASE STUDY

Canyons School District is located in the Southeast region of Salt Lake County, Utah. The school system serves approximately 33,900 students in 44 schools, including 29 elementary schools, eight middle schools, five high schools, and several special program schools.

This large district covers 192 square miles and relies on a well-coordinated bus system to transport 15,000 students daily on bus routes that cover close to 1.5 million miles a year. The district's 200 Transportation Department employees maintain a fleet of 175 school buses that serve over 4,700 stops and 2,500 activity trips annually.

"Student safety is a top priority for us and buses have more than their fair share of problems."- Director of Technology Support, Canyons School District

 "Our video systems are a key piece of technology used to keep our students and drivers safe. Bullying, fights, inappropriate behavior, accidents, and vandalism have all been documented with our camera systems. Video evidence is a critical piece of the puzzle that helps our Principals and Administrators know what happened."

Upgrading to Open Platform Technology
After several years of dealing with an older, failing, analog video system on its buses, the district needed to update the fleet. The district's Transportation Department together with the IT Department spent two years researching technologies and best practices to find the right mobile video security system. The team ultimately specified a system that includes video management software (VMS) from Milestone Systems, network cameras from Axis Communications and Sintron Technologies' mobile server/recorder. Stone Security is the Milestone Diamond Partner responsible for the implementation and maintenance of the solution.

Stone Security made sure the installation went according to Canyons School District standards: They worked around the district's tight bus schedule, keeping flexible in dealing with special situations and emergencies. Over 85 of the district's buses were installed with the new mobile video system during the summer of 2017 and the rest of the total 175 buses were recently upgraded this summer in preparation for school to start end of August 2018. In the future, when Canyons School District adds buses to its fleet, they will be outfitted with the same Milestone, Axis, Sintron solution.

"Milestone and Stone Security have been awesome partners," said the Director of Technology Support at Canyons School District. "We started this project after school ended in June, the same day we began to repave the bus yard. The logistics of getting old camera systems removed and new ones installed while at the same time having buses parked at many temporary locations was daunting. Stone Security handled it with grace and even finished a week ahead of schedule."

An important component of the solution is that the system must use open platform IP-based, industry-standard components. Traditional analog solutions only use proprietary cables, cameras, DVRs, etc., but the Canyons School District wanted to make sure that it moved to an open standard, so if problems arise, it would not be locked into any vendor, and a range of expansion options would be possible.

A Connected Solution
The Canyons School District solution includes on-board two, three or four AXIS M3037-PVE 360-degree cameras per bus depending on the size of the vehicle, and a Sintron mobile recording server, fully-customizable and ruggedized, Windows OS-based. Administrators can manage the OS, group policies, updates, and software from a centralized location with Microsoft System Center Manager. The server includes a built-in UPS to protect it from battery drops as the engine starts and stops, as well as loss of power in the case of a vehicle accident. It provides PoE to the cameras and has options for GPS, Cellular, multiple storage locations, WiFi, as well as reading data from a CAN-BUS network.

"Milestone VMS is the system we use for many of our school-based systems. By also using it in our buses, it makes it easier on our Principals and Administrators because they don't have to learn multiple systems," said the Director of Technology Support at Canyons School District.

The Milestone XProtect software was selected because it allows the recording server to be located on the bus and manage itself, while the Milestone Interconnect add-on enables the video to be transferred from the buses anytime the they are near a school or in the main bus yard over WiFi. Operators can retrieve video in a matter of hours following an incident, rather than days.

"We developed a new way to deploy the Milestone VMS for transportation. We're using XProtect Expert on the buses, with XProtect Corporate in the data center, and XProtect Interconnect as the connection between the systems. With Milestone, we were able to craft a flexible solution that didn't exist previously." - Andy Schreyer, Stone Security

Schreyer explained that video is stored redundantly within the bus both on the server as well as within the cameras. If there's an accident that takes down the server, video from the cameras can be retrieved. The bus servers store video for 30 days, and any time an equipped bus pulls into a district schoolyard, the server will connect back to the corporate Milestone server and offload the video.

The video is stored in the district's data center and accessed on an as-needed basis. When an incident occurs, the Transportation Department can share recorded video with school administration or local authorities.

Total Visibility
The internal 360-degree cameras cover all activity within a bus, often providing data from a minimum of two different angles. The system captures the four video streams coming from each camera (up to 16 video feeds from a four-camera equipped bus), and picks up external images through the windows as well. While some windows are digitally masked in the software to avoid excessive recording on motion, the district has an option for mounting cameras on the exterior of a bus. They can expand to external camera systems by equipping buses with Axis P3905-RE high-performance outdoor cameras, helping to assure that what's happening outside and around a bus is captured.

"I'm excited about the Milestone solution. After extensively studying all of the software and hardware manufacturers in the video security industry, the Milestone, Sintron, and Axis combination ticks all of the boxes. Also, we are not locked into proprietary systems as the industry evolves. Lastly, Stone Security has proven to be a rock-solid partner in all of this and I highly recommend them."- Director of Technology Support, Canyons School District

As incidents rise, do you need to enhance school security in your district? Get in touch with us and let's talk about what type of solution is right for you.

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