Shotpoint technology heightens Florida schools' security

As schools continue battling the COVID-19 pandemic, they must not overlook the security of their students, staff, and visitors. Even with thousands of K-12 campuses partially or entirely closed earlier this year, school shootings occurred at a record pace. What will happen once they all reopen?

School and law enforcement officials in Aventura, Fla., a planned, suburban community 17 miles north of Miami, aren't taking chances. Instead, they are hardening their campuses with some of the latest technology aimed at improving the response to active shooters.

Aventura operates two charter schools, K-8 and high school campuses with more than 1,600 students, faculty and staff, as part of the Miami-Dade School District, the nation's fourth largest.

Parkland shooting sparks action

What sparked Aventura's latest security upgrades was one of the nation's most deadly school shootings only 40 miles to the north in Parkland. In 2018, a lone gunman killed 17 students and staff members and wounded 17 more at Marjory Stoneman Douglas High School. Almost immediately, Aventura officials began a review of their security systems and protocols. The K-8 campus and the high school, which opened about a year later, already had access control, video surveillance and intrusion systems in place or planned. Following the Parkland events, Aventura added more cameras and security screens, new protocols were prepared, and the schools started campus-wide drills specifically addressing an active shooter situation.

Aventura Police Chief Bryan Pegues wanted one final piece for the security plan – a gunshot detection system capable of quickly and accurately identifying the location of shots fired on either campus. He and school officials chose a Shotpoint system from Databuoy Corp. Shotpoint uses finely tuned sensors that listen for the acoustic properties of a gunshot and, in less than two seconds, provide police with alerts showing where, within 1 meter, the shots were fired.

How Shotpoint works

The system works both outside and indoors with sensors placed in critical areas on each floor of the buildings and a breezeway connecting the two campuses.Each sensor includes four acoustic "detectors" that don't listen for voices but filter for the sound of gunfire and can pinpoint the exact shooter location. The unobtrusive sensors resemble a Wi-Fi extender.

Once a shot is detected, police receive a notification along with surveillance video taken four seconds before and after the gunshot. Police dispatchers share the data via smartphone with full-time, dedicated school resource officers on each campus and other department officers. A browser-based app displays real-time shot reports, including digital floorplans, shooter photos, shot trajectory, and weapon caliber. The completely automated system activates lockdown protocols, reduces response times, and enables better coordination between school officials and the police.

The sensors may be configured for Ethernet or wireless communications and Power over Ethernet (PoE) or AC/DC power input. Databuoy, Shotpoint's manufacturer, monitors the system ensuring the sensors and other components continue working correctly.

Keeping safety first

Chief Pegues said before and after the system was installed, his staff tested the Shotpoint system to the "maximum."

"We simulated multiple shots on different floors of each building," he said. "Shotpoint provided excellent performance and we learned we had the bandwidth to handle the worst of real-world situations. We received no false positive alarms after using the systems for more than two years."

Anthony Tyrkala, K-8 principal of the Aventura City of Excellence School, said no one comes to school each day anticipating a campus shooting.

"This is not what our teachers signed up for, but it is now part of our world, part of our reality.," he said. "But we've taken steps to prevent a tragedy or at least minimize the impact of any event."

"Nothing is more important to me than the safety of our students and staff," said Tyrkala. "We know we have a system in place that will identify not only a shooting but also support in the response. It was a no-brainer for us."

Chief Pegues said Aventura faculty, staff, students, and parents give the Shotpoint system high praise. And he complimented the Databuoy team for how it worked with school and police officials before and after the Shotpoint sale."

A lot of vendors make promises, but we had Databuoy executives here ensuring we would get the maximum benefit from Shotpoint," he said. I don't often endorse product providers, but the Shotpoint team was great."

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