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WHITEPAPER

The Gates ASPS: Active Shooter Prevention Software - **AI Security** Layer: **Smart Protection** Against Mass Shootings

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THE GATES OPINION

Despite determined efforts to secure their businesses from attacks such as a mass shooting, enterprises continue to experience a steady stream of high-profile breaches against established security infrastructures.

The reality is that existing security systems and architectures continue to have gaps and vulnerabilities. Well-established best practices and countermeasures to thwart today's complex and sophisticated blended mass attacks fail to provide the highest levels of protection for many businesses, schools and large events. During a 2017 research and discovery phase, conducted by (GDMST) Gates Department of Mass Shooting Trends, discovered that over 80% of participating schools and businesses are only somewhat confident or not confident in their security systems to prevent and protect against a massive attack.

The consequences of a single breach in security can have fatal and everlasting effects on societies businesses, families, and behavior. The impact of an event can damage an enterprise's reputation, credibility. In turn, customer retention suffers. The direct financial impact of a security breach can be substantial. The costs of forensic analysis, employee downtime, and staff time and labor to remediate the effects of a breach are significant. On average, a single breach can cost a business in excess of $300,000. If the effected business has to shut down for investigation.

The Gates believes that multilayered Artificially Intelligent solutions offer enterprises and the public a cost-effective and multifaceted alternative to enhance overall infrastructure security posture and improve customer and management confidence levels. By active shooter prevention software with additional security layers that detect and remediate threats that have bypassed conventional security efforts, can save lives, reduce the risks of breaches relating directly to mass shootings from existing unaddressed security gaps and vulnerabilities. By advancing enterprise security with a multilayered AI security software architecture combined with vendor-supplied security camera support services, businesses are able to provide safety to it's customers or members against a mass shooting.

METHODOLOGY

The premises and opinions of this white paper are based on leveraging a combination of research sources, including The Gates primary research as well as historical and current research efforts. In addition, The Gates participated in briefings held by its own internal department (GDMST) Gates Department of Mass Shooting Trends in order to gain an in-depth understanding of Trends in mass shootings.

IN THIS WHITEPAPER

In this white paper, we provide a background on today's mass shooting threats with an overview of weapons detection, the impact of mass shootings on enterprises, and the operational challenges faced by conventional security systems. We also describe The Gates ASPS approach to helping businesses, schools, places of worship and events attain enhanced AI security through the Gates Active Shooter Prevention Software Services offering.

SITUATION OVERVIEW

The Evolving Mass Shooting Threat Environment

If we lived in a static world, an effective solution for known mass attacks might have been achieved already. However, in today's impulsive and distracted society, there is no static state. Too often, attackers are relentless and suicidal in carrying out a mass attack, continually innovating effective smart strategies and schemes, while security professionals continue to struggle to keep pace with malicious intentions of an active shooter.

Today's enterprise active shooter threat environment has evolved and exploded into an assortment of massive attacks. Threat subjects that effectively work in concert to breach existing security systems to carry out an attack. The reality is that due to existing security gaps and vulnerabilities, current conventional security systems is less than 40% effective

Mass shootings in America are a serious problem

People have a greater chance of dying in mass shootings if they're at school or a place of business.
According to FBI data from 2013, incidents in schools and businesses represent 7 out of 10 active shootings. Some of the country's most high-profile mass shootings have occurred in those kinds of places: Mandalay Bay, Las Vegas, Boston, Sandy Hook, Columbine, Virginia Tech, San Bernardino, Parkland, FL and Santa Fe, Texas, El Paso, Texas. Overseas, these incidents typically happen near military installations.

Semiautomatic rifles have been used in some of the country's deadliest shootings, such as those in Newtown, Orlando, San Bernardino and Las Vegas. The AR-15, a lightweight, customizable version of the military's M16, soared in popularity after a 10-year federal ban on assault weapons expired in 2004. Some of the Las Vegas shooter's guns had been fitted with legal devices called "bump-fire stocks," which allow semiautomatic rifles to fire as quickly as automatic ones. In the latest shootings, Assault rifles such as the AK-47 has taken a lead in weapon of choice for in these attacks.

. Semiautomatic pistols is the country's most popular type of firearm, 9mm semiautomatic handguns, are used by many law enforcement officers. They are generally light and inexpensive, easy to conceal and control, and they fire as quickly as a person can pull the trigger. However Semiautomatic rifles is still the leading weapon used in mass shootings because it can **do damage much quicker.**

155 Shooters the vast majority were between the ages of 18 and 49.

152 Shootings in the 50 years before the Texas tower shooting, there were just 25 public mass shootings in which four or more people were killed. Since then, the number has risen dramatically. The deadliest shootings have occurred within the past few years.
Mass Shootings in schools and houses of worship tend to stick in our minds, but they make up a relatively small portion of mass shootings. More common are those in offices and retail establishments such as restaurants and department stores like Walmart. California has had more mass shootings than any other state.

Mapped places where most mass shootings have occurred.

Targeted places that have at least one or more things in common:

- Has an entrance and doorway and security cameras
- Has more than one entrance or doorway or column
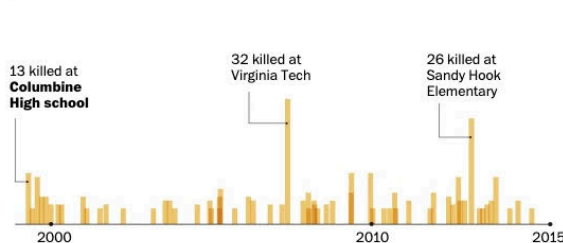- Has no intelligent security system **or weapon detection**
- Has security cameras

Mass Shooting Trends & Similarities:

- An Active Shooter had to bring weapons through an entrance **past a doorway or column of a building.**
- Had more than one weapon and or extra cartridges for reload and extended disaster purposes.
- Shooters were able to carry out a mass shooting successfully **before authorities were even alerted!**
- Shooter was able to claim the lives of 5 or more victims within 60 seconds.
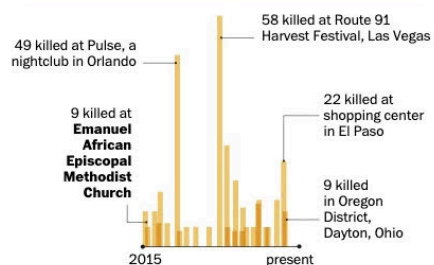- Authorities were not notified for at least 3 - 4 minutes into a mass attack.

Between August 1966 and April 1999, there was, on average, a mass shooting event every **180 days**

17 killed, including an unborn baby, at **University of Texas Tower**

23 killed at Luby's Restaurant, Texas

Between April 1999 and June 2015, there was, on average, a mass shooting event every **84 days**

From June 2015 until now, there has been, on average, a mass shooting event every **47 days**

13 killed at **Columbine High school**

32 killed at Virginia Tech

26 killed at Sandy Hook Elementary

49 killed at Pulse, a nightclub in Orlando

58 killed at Route 91 Harvest Festival, Las Vegas

9 killed at **Emanuel African Episcopal Methodist Church**

22 killed at shopping center in El Paso

9 killed in Oregon District, Dayton, Ohio

TheGates Active Shooter Prevention Software

The Gates ASPS 1.0 Software

Unconcealed weapons detection:

We have devised a tool that contains AI and machine learning that detects a weapon combined with threat behavior. It identifies, learns the scenario, then notifies anyone specified by the system preferences including its patrons. The Gates software contains the ability to activate early EMS and It has been proven that early EMS can and will save lives.

The Gates software contains the ability to customize the notifications work flow, and can integrate with existing systems and APIs. The only trigger point is a camera that finds a weapon and activates the system. The Gates ASPS owns zero to fifteen minutes of an active shooters attack. What happens in the first precious moments is very important. We believe early notification is key and have the ability to rate the event. There are different levels and the system is able to provide notification based on this.

The Gates ASPS, Positioning:

Gates ASPS is a Cloud-based, AI machine-learning technology. We integrate with existing security camera systems and have the intelligence to detect weapons, facial, and threatening behavior within 40 feet of an entrance.

AI Machine learning Facial recognition technology is used for unconcealed weapons detection and Behavioral analyzation along with 720p AHD Security Surveillance.

Data and events are sent to cloud for learning and historical analysis, connection back to onsite gateway for "learning" purposes.

Without latency, detected threats are escalated to on site security, local personnel and local Police Dept. via mobile app notifications, text message or email, notifications will reach you anywhere. Administrative options are customizable.

Gates ASPS has early detection and also has algorithms for preplanning for entry and intercepting an active shooter incident with the intent to prevent carrying out such an act as a mass attack. With each Gates ASPS system install, a layout of the building and entry points are retrieved and learned with AI, this helps generate best entry and exit points. It will pinpoint for law enforcement where the active shooter is, then it will recommend the best case scenario entrance point to apprehend the shooter.

On the Gates mobile app, first responders and law enforcement receive an AI generated (plan of entry), google maps graph view. Based on the active shooter's location and the layout and entry points of the targeted premises, first responders can choose to execute this entry plan or not.

The Gates ASPS Drone mobile system

The Gates ASPS is scalable, this means it can run anywhere. Each mass shooting is closely analyzed by our team and we determine how and where the Gates could of prevented this scenario. Preprogrammed IR drones connect with the Gates ASPS and connect with the cloud system will send early notifications if it finds a breach.

The Gates ASPS applies artificial intelligence to drone video cameras, allowing the video cameras to identify dangers and take action. Gates drones hover over entry ways and other points of entry at large gatherings, such as outdoor concerts, festivals, sports events and other events where mass amounts of people can be found. It can detect weapons, fights and other unusual activity and alert onsite security, safety officers and the local police via mobile app notifications.

The advantage is that Drones can see blind spots of large events that otherwise may become the next entry point for a possible threat, such as an active shooter.

Each mass shooting can be prevented with the technology of The Gates. Cloud based software and cloud-based intelligence that can be shared among the entirety of system installs. We believe we have the answer to maintain public safety.

The Gates ASPS 2.0 Software / Hardware

Concealed weapons detection:

- Multi censored Milli Meter Wave radar subsystems hardware install, works in conjunction with a security camera system to detect concealed weapons.

- Smart weapons and explosive material detection, notification and response system, configured to be unobtrusively placed at entrances of locations such as Hospitals, schools, churches and business establishments.

- Communicates with AI software to detect concealed weapons and escalate threats in sectors that include business, retail, sports, events, hospitality, education and religion.

CONCLUSION:

The Gates ASPS will protect institutions, firms and businesses against mass shootings by various forms of censor technology and Artificial Intelligence. When Integrated with existing security cameras, can provide early weapons and threat detection notification alerts to save precious seconds and minutes, resulting in saving lives.