

Defend your AO with ARA's combat-proven Pathfinder

Soldier Modernisation talks to Melanie Ferlito, BD lead at ARA for the company's Pathfinder product, about how it works and why it's the system of choice for military and border force environments

Q: What is Pathfinder and how does it work?

A: Pathfinder brings refined technology and early warning capabilities to the unattended ground sensor world for military, commercial and private physical security needs. Pathfinder's strength lies in its ability to provide personnel with the ability to monitor and act upon the threat BEFORE the damage occurs. Our solution uses a proactive approach called threat pattern analysis that allows you to understand and interpret behaviors within and around your facility's grounds. Pathfinder monitors movement through proprietary seismic algorithms (footsteps and vehicle movement as well as electrical power loss) as that movement is occurring. Our sensors provide detection notifications via commercial 3G/4G/5G networks. Color coded security notifications, shared via our proprietary software, allow security staff to prioritize their response via revealing movement patterns. For example, a series of sequential red dots likely indicate a quickly moving target. These alerts allow you to monitor movement to determine the threat, while also revealing routes for reconnaissance and surveillance.

Q: What are the advantages of Pathfinder over other systems on the market?

A: Pathfinder provides three key advantages over other systems. First, Pathfinder's footprint is smaller than other systems on the market. It's so small that multiple mini sensors can be carried in cargo pockets if necessary. Whereas other sensors have bulky, external batteries, Pathfinder's batteries are housed within the same case as the components, making for a sensor smaller than your average cup. Second, Pathfinder is a truly wireless system. Featuring ARA's patented radio technology, Pathfinder does not require the use of wires, gateways, or relays.

Third, is our strategic approach to the sensors' employment. We break down the emplacement locations depending on external factors to include Points of



The Pathfinder app delivers real-time data to field personnel.

Penetration, Route Analysis Detections, and Surveillance Detection Zones. Not only does this asymmetric placement of sensors better prepare you for intruders, but it also saves you money. It's not uncommon for security personnel to place perimeter fencing around property, but this method isn't always effective and can be quite costly. Our strategic placement enables you to employ the sensors so they are optimized to detect your most likely threats and their movement corridors, rather than create a perimeter around an entire facility.

By focusing specifically on the most probable, realistic threats to assets, in conjunction with the availability and readiness of a response force, Pathfinder can reduce our customers' costs by limiting the number of overall sensors necessary to truly secure your space. Add to this the benefit of receiving real-time alerts via the Pathfinder mobile application or through our proprietary software, and this system gives you a true advantage.

Q: What makes Pathfinder the system of choice for military/border security environments?

A: Pathfinder provides genuine autonomy that allows for integration with existing UAS and ground ISR systems, allowing our military and border security agencies to instantly target suspects. Pathfinder is also completely undetectable as our sensors are buried underground with only the antenna exposed. This makes it virtually impossible for humans to locate and disable Pathfinder.

Pathfinder provides a mobile application that pushes instant notifications to people on the frontline via a smart device for quick apprehension. Pathfinder has been fielded in combat theaters by the US military since 2010 and international governments worldwide, making it not only proven but trusted around the globe.

CASE STUDY

ARA has a range of case studies demonstrating the advantages provided by the use of Pathfinder, especially in military or border force settings. This example illustrates how Pathfinder provided base security on the border of two nations in Africa.

The Problem

The military base, situated on the border of two nations in Africa, was under constant threat of attack from a well-known and very lethal terrorist group. Personnel and cameras had a hard time determining enemy positions, thanks to heavy vegetation surrounding the base. This left the base vulnerable to a surprise attack, particularly at night.

The Solution

The location needed an accurate threat detection system that could alert the entire base should the enemy approach when least expected. Pathfinder was installed around the base perimeter inside and outside a security fence and also integrated into an alert system featuring a base-wide intercom system and automated lights.

The Result

As the enemy approached, they triggered the base alert system, allowing Pathfinder to detect them without them being aware. This allowed the military unit to launch a hasty defense, leading to the terrorists fleeing without firing a single shot. In addition, Pathfinder sensors monitored their retreat into the vegetation, ensuring they had fallen back. ■

For more information: www.ara.com



Pathfinder is nearly invisible thanks to its small footprint and wireless technology.