

CASE STUDY: OIL & GAS

SeekOps Pinpoints Gas Leaks With Space Age Tech and Panasonic Rugged Tablets

Challenge

To deliver on the promise of a new drone-based detection system for methane gas leaks — a threat to both safety and profitability for the oil and gas industry — SeekOps needed a mobile solution that was reliable, versatile, rugged and easy to read in the field.

Solution

Having come to trust Panasonic Toughbook® computers previously at NASA's Jet Propulsion Laboratory, the founders of SeekOps paired their methane detection drone with a Panasonic Toughpad® FZ-G1 tablet due to its 10" form factor, daylight readable screen, long battery life, and rugged durability.

Result

SeekOps now offers a technology platform that makes detecting process emissions and gas leaks significantly faster and more accurate thanks to the Panasonic tablet purpose-built for energy professionals, from oil rig technicians to utility ground teams.

How can technology designed to detect signs of life on Mars save lives here on Earth? For SeekOps, a leak detection service provider for the energy industry based in Pasadena, CA, that question is at the core of their business. Leveraging sensor technology developed at NASA's Jet Propulsion Laboratory (JPL) for the Mars Curiosity Rover, the company's founders realized that those sensors — designed to measure trace amounts of methane gas with a high degree of accuracy — could play a critical role in helping the energy industry identify potentially dangerous methane leaks at production and storage facilities, as well as in towns and cities served by natural gas.

SeekOps successfully set out to transition the NASA miniature methane sensor technology from a proven prototype to a commercial service — based on the technology the founders first demonstrated mounted to a drone for oil production surveys and gas utility safety inspections. SeekOps commercialized a solution that can detect leaks faster than traditional manual inspections. The solution provides significantly more high quality data than other methods, which translates to more effective, accurate and sensitive leak detection and localization. Now oil and gas operators have immediately actionable information.



What the SeekOps team needed to pair with their sophisticated instrument was a technology solution that enabled field teams to easily receive and interpret data in the field sent back from the methane-sensing drone. For that they turned to Panasonic Toughbook®.

Having worked exclusively with Panasonic Toughbook® devices during their time at JPL, the SeekOps team was familiar with the Toughbook promise of rugged reliability and performance. For their drone platform, they knew they needed a device that was specifically built for field workers – easy to read in bright sunlight, long-lasting battery life, a rugged design and the ability to run the custom software used to interpret and display data from the methane sensor.

After looking at the suite of Panasonic Toughbook® offerings, the SeekOps team concluded that the Panasonic Toughpad® FZ-G1 tablet was the right fit for the job.

“With a screen readable in even the harshest sunlight, amazing battery life and the portability we were looking for, the choice to go with the Toughpad G1 was an easy one,” said Andrew Aubrey, CEO of SeekOps. “There’s really nothing on the market that could contend with these devices, and we knew when we took it out into the field, that we had made the right hardware choice.”

With the Toughpad G1 on the job, SeekOps had the tool they needed to deliver on their promise of fast, accurate and cost-effective detection of methane gas leaks. When they fly their drones over production facilities, SeekOps employs a three-person team – a pilot for the drone, a safety observer and a ground control operator armed with the Toughpad G1 tablet. These teams can get set up and begin inspecting a wellpad in under 15 minutes. Using custom software, the ground control operator has a real-time view of streaming data from the drone that not only shows if a gas leak is detected, but determines its exact location, estimates the rate of gas loss, and assigns it a severity grade.

“Where traditional, manual inspections can take hours to complete, racking up costs along the way, the SeekOps drone platform can cut that to a matter of minutes,” Aubrey added. “And the results we’re able to get thanks to this potent combination of technologies means our energy industry customers are not only able to identify where a leak is, they’re able to get detailed readings that empower them to fix it quickly and efficiently.”

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Andrew Aubrey
CEO
SeekOps

This full detection solution — powered by space age technology and the rugged mobility provided by Panasonic Toughbook — has the potential to change the way that safety inspections are conducted at oil and gas facilities around the globe. That means faster, cheaper and smarter ways to ensure that gas leaks are found and stopped, saving money and, more importantly, lives in the process.

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