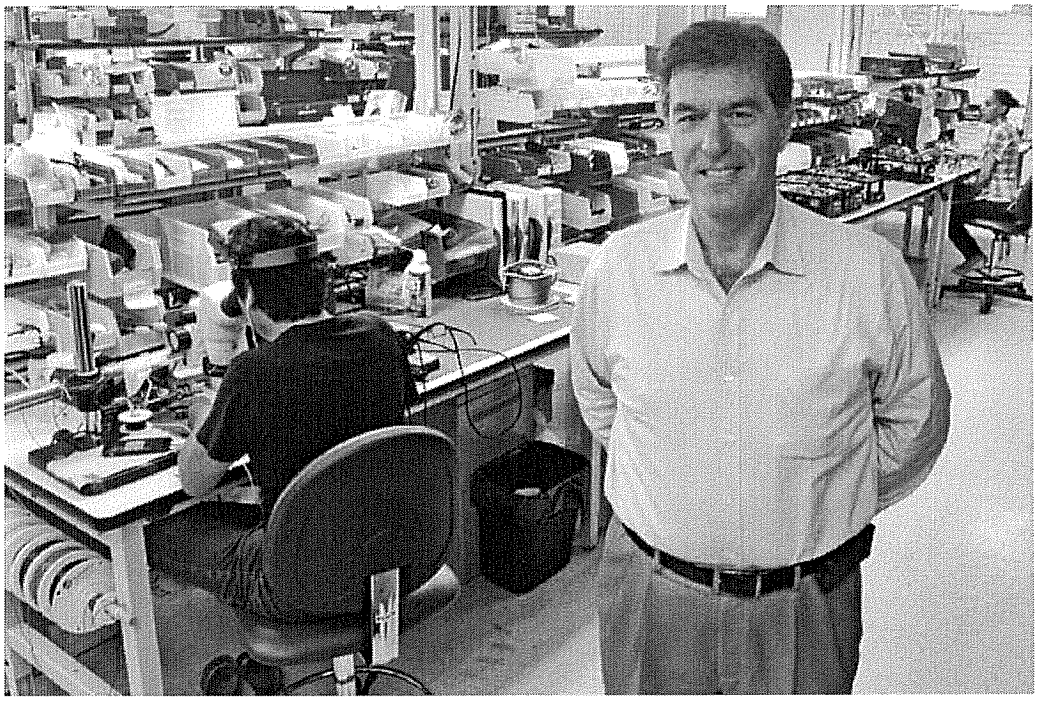
What's New: Block receives $9.8M US grant to develop chemical detection system

Petros Kotidis, chief executive officer of Block MEMS and Block Engineering in Marlboro, said, “The idea is to develop a system that you can carry around, scan when you point it a wall or a car 30 meters away, and the system will ‘say 'I see TNT.' ” T&G Photo/Chris Christo

- **By Erin Bassler**
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MARLBORO — In an effort to protect against chemical warfare attacks, the government has contracted engineering company Block MEMS, LLC, to develop a new standoff infrared detection system based on quantum cascade lasers.

When completed, this portable technology will be capable of scanning surfaces from 100 feet away or farther to detect and identify hundreds of different chemicals, including alkaline and vinyl chloride.

Under the U.S. Office of the Director of National Intelligence, the Intelligence Advanced Research Projects Activity, as part of its Standoff Illuminator for Measuring Absorbance and Reflectance Infrared Light Signatures program, has granted $9.8 million to Block for the contract, and its system's development is under way.

"The idea is to develop a system that you can carry around, scan when you point it a wall or a car 30 meters away, and the system will 'say 'I see TNT,' " explained Petros Kotidis, chief executive officer of Block MEMS and Block Engineering LLC.

Block MEMS and Block Engineering are separate private companies that share the same facilities and have the same management and leadership. Founded in 1956, Block Engineering is specifically focused on manufacturing and shipping hardware and systems, while Block MEMS primarily handles official government contracts.

"One way to look at it is that Block MEMS is more of an R&D company, and Block Engineering is more of a manufacturing company," said Mr. Kotidis, who holds a doctoral degree.

Known for its quantum cascade laser products and FTIR spectrometers, Block also specializes in standoff technology, meaning the detection of chemical threats at a distance to prevent disasters before they happen or escalate.

Its systems house an enormous database with thousands of chemicals on record. Similar to how a person or computer may study a fingerprint to identify a person, Block's technology uses the signature that a liquid leaves behind, to analyze and classify the chemical.

Over the last decade, Block MEMS has been awarded government contracts to create new and improved systems to detect chemical warfare agents, toxic materials, explosives, weapons of mass destruction, and other chemical threats to safety.

The security district benefits the most from Block's work. The government applications of this technology can be useful for finding and preventing terrorist attacks in the form of suicide bombers or bomb planters.

Public areas gain an advantage with Block technology installed or when it's carried by emergency and police personnel responding to incidents at airports, stadiums, government buildings, college campuses, and train stations, and many more.

There are also a number of commercial applications for Block's technology, as well as several opportunities for research. Most of Block Engineering's efforts are focused on meeting that demand, whether for pharmaceutical cleaning, study and monitoring, or leak detection.

The gas and oil industry uses Block technology in refineries, pipelines, and emissions control. For remote process monitoring, the systems' chemical analysis is most effective for real-time application. Adaptable products like Block Engineering's LaserWarn can also detect gas leaks and sound alarms to alert personal to the problem.

"A lot of universities and research facilities have also bought our systems," said Mr. Kotidis. "I would call them beneficiaries as well, because they use this technology for new materials and other applications."

Block is currently 25 people strong, with partnerships with various small businesses and distributors across the globe.

They strive to grow as a next generation business and become the standard technology in regards to chemical security and process control. Given enough time and effort, Block may eventually become the official go-to for other companies when safety equipment, chemical analysis, or detection systems are needed.