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Technology firm sees Navy contract as key to rapid growth

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A small local technology company expects to win a nearly \$20 million federal contract and expand rapidly within the next year.

Pukoa Scientific, named after a variety of coral, specializes in pattern matching of acoustic signatures. Simply put, Pukoa is creating software that will allow military personnel to recognize terrorist divers swimming nearby based only on sound. The commercial and military applications for such software are immense.

Pukoa President Jim Karins told PBN the company expects to secure a large contract from the U.S. Naval Laboratory within the next year. He expects the contract to be between \$10 million and \$20 million and to last three to five years, depending on how much funding is available and how quickly the project gets approved.

Working below the radar

Since it was founded about a year ago, Pukoa has stayed below the radar. Its four employees work from their homes and the business operates on about \$500,000 in revenue from federal contracts related to the pattern-matching software it's developing.

But once the Naval Laboratory contract comes through, Pukoa will grow rapidly to 20 employees and seek office space. Revenue is expected to grow tenfold to about \$5 million per year over the next two years, Karins said.

The U.S. Navy has used sonar systems to detect objects such as submarines and ships, but has yet to develop sonar that can detect people effectively, Karins said. The Navy now is investing more money into protecting ships and personnel from those smaller, more covert threats.

Pukoa also will pursue other projects related to pattern recognition once the defense contracts come in. The company plans to do more research in acoustic pattern recognition and expand to visual pattern recognition for mobile targeting.

Acoustic pattern recognition essentially is recognizing different sounds, though in practice it's much more complicated. Commercial applications are vast, particularly for security. For example, it's possible to use the technology to listen around buildings using fiber optic cable laid into the ground and hear if someone has penetrated a perimeter.

Visual pattern recognition for mobile targeting will allow a missile to go to a certain area and find a target. Right now military personnel generally give specific coordinates of a target and the missile finds it, but that doesn't work as well for moving targets, such as a truck. This technology would allow the missile to go to the last known position of a target and then seek it out based on what the truck looks like.

Commercial applications

include pattern recognition in commercial applications

licaNovaSol, which is a broadly focused defense contractor, a year and a half ago to work exclusively on his pet project, pattern recognition.

"It gets hard to bring things to market when you're working on so many different areas," Karins said. "The most important thing that I wanted to focus on this time was to hold myself to a core technology."

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