Airport security is a tech-firm gold rush

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For airline passengers, the attempted Christmas Day attack and a directive by President Obama to pursue advanced screening technology will certainly mean added security procedures at airports.

So for high-tech companies, the increased focus on airport security means new opportunities to land hefty government contracts.

Among those is Syagen Technology Inc., a Tustin, Calif., company with 20 employees that has built an airport screening device that blows air on travelers and then analyzes the cast-off particles to detect explosives. The Transportation Safety Administration shelved an older version of the device because of maintenance problems. But, company President Jack Syage said, the Christmas attack has renewed interest in the next generation of air-analyzing units.

"Everybody has started to talk about new technology at the airports," he said.

Other firms, including a small New York company that makes a shoe-scanning device and a Torrance, Calif., venture that builds screeners to take full-body images of passengers, have shifted into high gear in recent weeks to meet the renewed security efforts.

And plenty of money is at stake.

The Obama administration set aside $1 billion last year in stimulus funds for new security technology for the TSA. About $700 million of that will

be spent to improve baggage screening efforts, and $300 million is allocated for technology to detect explosives carried by passengers.

In response to a presidential order this month to "aggressively pursue advanced screening technology" at airports, Homeland Security Secretary Janet Napolitano said her agency would move quickly to deploy new machinery and would work with other government agencies to develop cutting-edge security equipment.

Some of the new technology may also come from government scientists. The Homeland Security Department's science and technology directorate operates a laboratory in New Jersey where technology is developed and tested. For example, scientists at the lab are trying to create a device that, much like trained dogs, can smell explosives.

"There are a lot of things we are looking at that are not ready for prime time," said John S. Verrico, a spokesman for the directorate. "A lot of it may not even work."

Such devices will be added to what analysts call a "layered approach" to airport security. This means that before passengers board an airplane, they must clear a series of security measures and devices such as watch lists, X-ray scanners, metal detectors and full-body image scanners.

Despite the advanced wizardry of today's security devices, some terrorists might already be devising ways to skirt them.

"Even though it is a layered approach, it is fairly predictable," said Steve Vinsik, a vice president at Unisys Corp., one of the many larger companies also involved in the rush to improve airport security. The Pennsylvania firm won a contract last month to design and manage a security system for Los Angeles International, L.A./Ontario International and Van Nuys airports.

Unisys evaluates and coordinates the use of different technologies, but Vinsik said he believes more money should be spent to train and dispatch airport security agents.

"At the end of the day, there is no computer system that is going to replace that," he said.

Still, small and large technology companies see the heightened concern about airline security as a chance to turn a profit.

Michael Goldberg, president of IDO Security, a New York company with 11 employees, was thrilled last month when the TSA issued a "request for information" on devices that screen shoes for weapons and explosives.

The request means the TSA wants to gather information about the technology on the market, with an eye toward eventually ordering the devices. About nine years ago, a man on a flight from Paris to Miami tried to ignite an explosive hidden in his shoes.

Goldberg submitted to the TSA information on his invention, the Magshoe, a step-on device that screens shoes while they're still on passengers' feet. The units, priced between $5,000 and $7,000 each, can detect metal and metal compounds in explosive material. The Magshoe is already in use at airports in Israel and will soon be deployed in China.

"The time for our technology has definitely come," Goldberg said.

After the attempted attack on Christmas Day, in which a Nigerian national is accused of trying to detonate explosives hidden in his underwear on a flight from Amsterdam to Detroit, the TSA announced plans to buy 300 new full-body scanners that can produce what looks like a nude image of passengers, showing weapons and explosives hidden

under clothes.

Smiths Detection Inc., a New Jersey-based security technology firm with about 2,500 employees, is testing a full-body scanner that can produce a passenger image instantly. (Similar devices take up to 15 seconds to create the image.) The units sell for about $170,000 each.

"The TSA is aware of this technology," said Mark Laustra, vice president of homeland security for Smiths Detection, which has been making X-ray machines and other security devices for airports since the 1980s. "The indications we have are that it is something they want to look at more closely."

Other security companies, such as Rapiscan Systems of Torrance and L-3 Communications Holdings Inc. of New York, also plan to compete for the TSA contract for full-body scanners.

Years ago, aviation security officials believed the future of airport security was in explosive trace portals, which analyze particles blown off of passengers.

In 2005 and 2006, the TSA bought more than 100 such portals at a cost of about $20 million. The devices, installed in 36 airports, resemble door thresholds. When a passenger steps into the threshold, puffs of air dislodge particles from the skin and clothes. The trace portals analyze the particles to determine whether the passenger had come in contact with explosive materials. There are also desktop devices that analyze particles picked up by swabs swiped on passengers or their luggage.

But in 2007 the TSA shelved the portals, built by GE Security and Smiths Detection, because high levels of dust at airport terminals caused maintenance issues and triggered too many false alarms.

However, Syage said that after the Christmas Day attack, a TSA official told him there was renewed interest in testing Syagen's next generation of trace portals. Syagen, he said, has solved the problems with maintenance and false alarms, and the portals sell for about $130,000 each.

"Our contacts in the Department of Homeland Security and TSA indicate that portals like ours are getting serious reconsideration," Syage said.

The TSA declined to comment on Syage's assertion, but a spokesman said the agency continues to research several technologies to keep ahead of evolving threats.

For example, the TSA has begun testing a hand-held scanner that can test liquids carried by passengers for potentially explosive materials. In 2006, British authorities foiled a terrorist plot to detonate liquid explosives on U.S.-bound flights over the Atlantic.

In November, the TSA awarded Smiths Detection a $22-million order for liquid scanners. The hand-held device shoots a laser beam through a clear container, such as a water bottle, and analyzes the resulting spectrum to determine whether the container holds potentially dangerous material.

Said Laustra of Smiths Detection: "We are deploying it to airports right now."