

Brijot Hopes 'Passive' Detection Will Carve Out Market Niche

By Rob Margetta, CQ Staff

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As the Transportation Security Administration moves to deploy nearly 1,000 whole-body imaging scanners at U.S. airports, privacy advocates and some lawmakers remain concerned about the machines' privacy implications.

The two technologies TSA has approved so far for whole-body imaging — “backscatter” machines that use low-dose X-rays and “millimeter wave” systems that use high-frequency radio signals — are capable of producing detailed images of passengers' bodily contours. But while that capability is a privacy headache for some observers, Brijot Imaging Systems hopes that same controversy will present a selling point for the “passive” system it has submitted for TSA evaluation.

Backscatter and millimeter-wave machines work along the same basic principle as sonar and radar — they emit energy, either in the form of X-rays or radio waves and interpret whatever a targeted object reflects back. In contrast, Brijot says its system is only capable of receiving the energy given off by a human body, not emitting any of its own.

“A human is usually the hottest thing in the room and they emit what's called ‘black body’ radiation,” said company CEO Mitchell Laskey. “We can collect that information and interpret it. . . . The easiest way that I explain it to non-technical people is it reads the heat from your body and objects concealed on your body.”

Objects concealed on top of or below clothing block the flow of that heat energy, showing up as “dark spots” on Brijot's readouts, which would tell operators where to search, Laskey said. He added that, unlike competing technologies that generate images of travelers' bodies and the objects hidden on them, the Brijot system does not have to produce detailed pictures — it just has to identify the dark spots.

“Image quality for us is not seeing every curve of your body,” said Rachel Wanner, company vice president of global marketing.

Like its competitors, Brijot is working on a computer-assisted capability that combines automated detection with a real-time display that human operators can monitor.

“We call it human auto assist,” Laskey said. “When we see a temperature differential, we place a box around it. . . . We believe that helps the [transportation security officer].”

Studies have shown that human-assisted detection will ultimately increase the probability of detection.”

The only two whole-body imaging companies with TSA approval, Rapiscan and L-3, are trying to address the privacy issue, developing filters for their machines that produce silhouette-like pictures with suspicious areas flagged, instead of detailed images. But Laskey questioned whether those filters would affect the machines’ security performance.

“They’re diminishing their detection capability,” he said.

Laskey cast his scanner as a favorable alternative to Rapiscan’s backscatter machine for another reason: passive technology does not present the health concerns associated with X-rays.

TSA plans to use money from last year’s economic stimulus package ([PL 111-5](#)) to deploy roughly 150 new backscatter units in the coming months, and experts from both government and academia have noted the machines use extremely low doses of radiation; a standard chest X-ray, in contrast, is nearly 1,000 times more powerful. However, some in the medical field still [question](#) the wisdom of subjecting travelers to even a minute risk in security.

L-3’s millimeter wave does not carry those health concerns, but Laskey said his system still has an advantage because it cuts out emissions entirely.

“We don’t have any radio waves or X-ray waves that bombard an individual,” he said.

Federal and International Competition

Umar Farouk Abdulmutallab’s alleged Dec. 25 attempt to blow up Northwest Airlines Flight 253 did more than spur the federal government’s whole-body imaging program, which had slowed dramatically since initial interest in the wake of Sept. 11, 2001. The bombing attempt also created a multimillion-dollar pot for scanning-equipment contractors to chase.

TSA already had designs on deploying about 500 of the machines to airports, and President Obama’s fiscal 2011 budget request includes \$215 million for 500 more scanners. Rapiscan and L-3 have the advantage of already completing TSA’s lengthy evaluation period. But other companies, including Brijot and millimeter-wave producer Smiths Detection, are scrambling to get approval in time to benefit from the expected large-scale procurements.

Wanner said Brijot is hoping to complete the evaluation and approval process by the end of the year.

“We’d of course like to be through the testing process before the money is allocated for this year,” she said.

But there's more at stake for the company than just having the U.S. government as a customer. Brijot's system is currently deployed in seven United Kingdom airports, several Saudi Arabian palaces and is undergoing airport testing in Italy. Laskey said the international market would open up further with TSA approval because other countries take their air-travel cues from the agency.

"TSA seen as gold standard around the world," Laskey said. "There's no question in my mind about that. That's why I think we have a long and rigorous process, because I think other nations are watching."

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