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In a whorl

Albuquerque company goes deep with fingerprinting technology and reaps the rewards of brisk business

By Mike Tumolillo
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Fake fingers. Abraded fingers. Dead fingers.

Those are a few of the challenges to getting a good fingerprint that Lumidigm says its LightPrint technology can overcome.

Investors, including Motorola, apparently agreed: Albuquerque's Lumidigm recently picked up $8.1 million in funding that will help the company hire at a time when it has "more opportunities right now than we have people to address them well," said Robert Rowe, chief technology officer.

Unlike other fingerprinting technology that only reads the surface of the skin, Lumidigm's goes one step further and uses light to reveal the one-of-a-kind structures below a fingertip that give rise to the unique skin patterns above.

"What we're doing is we're measuring fingerprints, and we're able to measure the internal fingerprint and compare it to the external fingerprint," said Matthew Ennis, director of business development for Lumidigm.

If there's a mismatch between what's below and above, the technology will know, Ennis said. It also can identify living flesh, so fake fingers - or, say, a severed finger out on loan - won't pass the test.

To boot, it can work in environmental conditions - rain, cold, extreme dryness and direct sunlight - that pose problems for other fingerprinting technology.

Hundreds of units using the LightPrint technology are being shipped to a large company Ennis was not allowed to name, "but everyone would recognize it," he said.

Revenues for 2005 have hit $2.5 million, and the plan is to get as close to $100 million in annual revenue as possible over the next four years, Ennis said.

Driving demand is the country's growing appetite for more security in areas that include online commercial transactions, border control and building access, he said.

"More and more of our transactions are happening when you don't know the person on the other side," he said. "That's another reason you need to authenticate why the person is who they say they are."

Lumidigm is partnering with Cross Match Technologies, a company supplying fingerprint sensors for use by U.S. immigration officials, Ennis said. By January, he said, Lumidigm's sensors will head out to immigration checkpoints in large numbers.

A few years down the line, the company plans to use its sensors with laptops, desktop computers and hand-held computing devices.

"This year more Google searches are done on hand-helds than are being done on computers or laptops," Ennis said. "Next year it's believed more financial transactions will happen on hand-helds than on laptops and computers. The ultimate goal for Lumidigm in the consumer space is putting the biometric on hand-helds so you're able to have your secure transaction."

Down the road, Lumidigm's sensors may also join the gear carried by U.S. soldiers.

The company is researching a sensor that would work with soldiers' wearable computers of the future, Ennis said. It could go on the forearm and would continuously make sure whoever used it was the one assigned to a particular computer. A product may be ready by 2008, Ennis said.

Lumidigm began in 2001 as a spinoff of InLight Solutions, an Albuquerque company that works on noninvasive optical measurements.