Time-shaving body scanner system to go to work in test trials

October 29 2016, by Nancy Owano

Credit: evolvtechnology

(Tech Xplore)—From Nairobi to Paris to London to Manhattan, everywhere, really, anything can happen when terrorists are loose and at work. Concert halls, sporting events, bus stations, airports—any site drawing in large crowds is a potential target for those who want to cause terror, death, property destruction, blows to the economy.

Body scanning for explosives and other harmful devices has become one tool for public and private officials seeking to avert acts of terror.

Now comes news that a system designed to deliver very fast body scanning is planned for trials at US travel hubs. The system could certainly play a role in preventing mass casualty events at concerts, malls, airports, train stations.

How fast? Fast as in travelers walking through the gates without having to stop. Fast as in people able to carry all the things they would normally carry, such as phone, keys and wallet through the security gates.

Thomas McMullan in *Alphr* said the scanners can do the job "in a fraction of a second."

Seattle-based Mark Harris writing in *The Guardian*, named transport hubs that include Los Angeles and Washington. The Denver airport said its pilot project with Evolv had yet to be finalized. The test in LA is due to run next month for three or four days

These will be the first public trials for the Evolv sentry system. Evolv Technology is the company behind the system.

This is a Massachusetts-based company with an expert group of people including those who joined the company with experience in the physical security space for years.

The team believes that if we are going to try to provide better security without disrupting people's everyday pace of life, then it should be accomplished with the latest sensors, software and analytics.

Is that it for the system? No. Harris said that a security guard with a tablet is nearby and the guard sees either an "all-clear" sign, or a photo of

the person with suspicious areas highlighted.

ZDNet's Liam Tung said, "If there is a concealed firearm or bomb strapped to the person's waist, the image will mark where the prohibited item is located on the body."

The Evolv sentry system, according to *The Guardian*, uses millimeter-wave radio frequencies, just as airport scanners do, along with computer vision and machine learning. *ZDNet*'s Tung said the equipment operates in the 24GHz to 30GHz range.

Reports said the system can do over 800 people an hour.

Harris explained how the technology works.

The scanner has a camera that takes a photo of each person passing through. An AI system has been trained to spot distinctive scattering patterns from objects. Solid state micro-antennas are used to steer radar beams over anyone walking through the gate, and to pick up reflections. That data is fed into this AI system.

What about privacy issues?

"We never build an image that would enable anyone to see anatomical details, so there's no naked peepshow in the first place," says Michael Ellenbogen, Evolv's CEO, in *The Guardian* report. "None of the raw data is stored and none of the data we do keep is traceable to an individual."

More information: evolvtechnology.com/blog/3-way … -impact-the-airport/

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