

ARTICLE

UTAH COMPANY USES THE EYES TO DETECT DECEPTION

By Devin Felix

July 21, 2014

Lehi — They say the eyes are the window to the soul, that if you really want to know a person, just look deep into their eyes. Now a Lehi-based company has taken that idea, applied some science and engineering to it, and created a device that can tell—with a high level of accuracy—whether a person is being honest.

The company is called Converus, and its device is called EyeDetect. It tracks and analyzes subtle changes in a person's eyes to determine whether they're lying.

Todd Mickelsen, president and CEO of Converus, said EyeDetect is a quicker, cheaper, less invasive and more accurate lie detector than the polygraph, which has been in use for nearly 100 years. It has the potential to help businesses reduce corruption and, in doing so, save money.

"The higher goal here is to create a culture of honesty," Mickelsen said. "Corruption is the sand in the gears of progress. It's estimated by the World Bank that 20 percent of revenue that would otherwise be generated in the world goes toward corruption."

EyeDetect operates based on the fact that the brain has to work harder when a person lies, which has a side effect of causing subtle changes in the eyes. Here's how it works: The person being tested reads and answers a series of true-or-false questions on a computer. As they do so, EyeConnect's infrared camera, which is mounted on the bottom of the computer monitor, watches their eyes, evaluating 16 different criteria, such as pupil size, eye movements and whether the eyes lingered over specific parts of the question longer than others. Data from the test are then encrypted and sent to Converus' cloud server in Utah. The company processes it and generates a score, from one to 100, ranking the trustworthiness of the test subject.

Mickelsen said EyeDetect improves on the polygraph test, which has been in use since the about the 1920s, for several reasons. He said it has shown a greater degree of accuracy than the polygraph, which is largely due to the fact that it eliminates much of the potential for human error. Polygraphs must be administered by a trained technician, and even the most experienced technician has her own biases, which can taint the results. EyeDetect is run by a computer, without the involvement of any person other than the person being tested.

EyeDetect is also much quicker than the traditional polygraph test, taking only about half an hour to 45 minutes, rather than several hours. It is also less invasive, because it doesn't require hooking the subject up to sensors and wires, as the polygraph does.

The technology was developed in the early 2000s by John Kircher and Doug Hacker, who were professors at the University of Utah. Converus brought EyeDetect to market in May of this year after conducting tests at a technical university in Mexico to show its effectiveness. So far, Converus has sold its EyeDetect in Latin American countries, where employers use it to screen potential hires to see whether candidates are trustworthy. Mickelsen says the tests can help employers determine whether someone has been involved in the drug trade, if they've accepted bribes or otherwise been involved in illegal activity. Customers can also administer tests to existing employees.

The United States has a law that prevents employers from administering lie-detection tests to their employees or prospective employees, with a few exceptions, including government employees and law enforcement officers. In addition to possible employment screening in those areas, Mickelsen said there are other potential applications for the technology in the U.S., including testing sex offenders and parolees to see if they're adhering to the restrictions placed on them. The company is currently conducting trials in hopes of being certified for use by U.S. law enforcement and government agencies.