'Driving under influence' test inside car will check driver's finger

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The TruTouch Guardian device.

(PhysOrg.com) -- TK Holdings Inc., a subsidiary of Takata Corporation of Japan, manufacturers of safety belts and airbag modules, will partner with TruTouch Technologies to create an in-car detection device that can tell if the driver is too drunk to drive. The device will check out the driver's blood alcohol level through the skin of the finger. The finger-scanning device is seen as a nonintrusive but reliable way to keep drunk drivers off the road.

The envisioned reader of blood alcohol content (BAC) will be small, as part of the button that turns the car on. If the driver is inebriated, the car won't budge, even after the driver hits this “start” button.

TruTouch, is a company that defines its specialty as noninvasive

biometric intoxication detection systems. Its product for this automotive application has an infrared light. The optical touch pad transmits light into the skin via direct contact and collects a portion of the light reflected back by the skin. This signal is analyzed to determine the alcohol concentration and verify the user's identity. The device's test is said to be as accurate as a blood test.

Takata is aiming to get the cost down to approximately $200 each.

To move the product further into development, the two companies partnering for this device have received a $2.25 million grant from the National Highway Traffic and Safety Administration (NHTSA) through the Driver Alcohol Detection System for Safety (DADSS) and the Automotive Coalition for Traffic Safety (ACTS).

As for accuracy, observers say it would be a step up from the breathalyzer test, which can yield false positives. The Takata-TruTouch device could be on the market in eight to ten years. According to the NHTSA, the technology could be voluntarily installed as a new-car option.

Skeptics ask if a voluntary, not mandatory, solution of this type will bring any meaningful change in the numbers of road accidents caused by drunk drivers. Nonetheless, supporters say the device may signal a new era in safety against drunk drivers.

In 2009, close to 11,000 Americans, or one every 48 minutes, were killed in drunken-driving accidents, or 32% of the country's total motor vehicle traffic fatalities, according to NHTSA data.

As part of further product development efforts, the goal is to reduce processing time and to function not just at room temperature but under hot and cold temperatures and with different humidity and vibration

levels.