'Flashlight' is newest weapon against drunken driving

By ALLAN PARACHINI
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The motorist had consumed five or six beers in the two hours or so before he got into the car to drive home, but, he figured that he could maintain a steady speed and find the center of the lane well enough to avoid detection by police.

Even if he was stopped, he knew that he was speaking coherently, thinking halfway straight and could probably bluff his way through the questions of a police officer.

And he knew the odds were — and historically have been — on his side. By many police and highway safety estimates, only about one of every 4,000 drunken drivers on the road at any one time will be arrested. One thing the police have long needed, many officers say, is a gadget they can stick inside a car to detect quickly the odor of alcohol at the roadside.

The motorist spotted red lights behind him and pulled over. The police officer pointed his flashlight inside the window to scan the license. But the officer noticed a bulge on the end of the flashlight and heard a faint sort of pumping noise as the cop manipulated some small switches that, obviously, had nothing to do with turning on the light.

The cop glanced at a little three-digit readout on the top of the flashlight and then said the words the driver had always been able to hear: "Sir, could you step out of the car?"

Possibly within a year, drunken-driving enforcement in many parts of the country may undergo just such a high-tech revolution with introduction of the fancy $600 flashlight. The unit's fat end conceals a small but sophisticated sensor that detects the odor of alcoholic beverages inside a car or on the breath of the driver or other occupants.

It is no ordinary new commercial product. Instead, it has been developed under a research program set up and paid for by a safe-driving think tank supported by the nation's automobile insurance companies. The sensor's prospective manufacturer is not directly involved in promoting it.

The device has been tested by at least two police departments and the one that used it most extensively says that it is ready to use if now that the sensor is about to go into full-scale production and be offered for sale to departments across the country.

The Charlotte, Va., police department, which has the most experience with the prototype sensor, found it sniffed out 66 percent of drivers at a series of drunken-driving roadblocks last year — whose blood alcohol levels were .10 percent or higher while officers working without the sensor could detect only 32 percent of the drunks. For people with just under the legal minimum — drivers with blood alcohol of .05 or more but who probably still were not sober enough to react quickly in a high-speed emergency — the sensor fingered 45 percent while the officers detected just 24 percent.

Moreover, anticipating a possible legal tangle over whether the sensor violates driver's rights guarantees against unreasonable search and seizure, the federal government's National Highway Traffic Safety Administration has conducted an analysis that concludes the gadget passes constitutional muster.

While the legal questions remain unresolved, street cops seem generally excited about the new device. California Highway Patrol Officer Rick Stevens, for instance, took a look at a prototype of the device recently as it was being demonstrated by Brian O'Neill of the Washington-based Insurance Institute for Highway Safety, which paid for the sensor's development. O'Neill was in California to attend a traffic safety conference at the Anaheim Convention Center.

Stevens watched with interest as O'Neill manipulated the sensor, and then said, "I've been waiting for something like this for 10 years."

The bulging flashlight houses what is called a passive alcohol sensor. In many ways it is a sort of super-miniaturized version of the familiar breath analyzer.

Since it doesn't focus on a breath exhaled from deep inside the lungs by the suspect, however, the hand-held sensor can't make accurate readings of the precise alcohol levels in the bloodstream. Its reading, alone, would not be enough to convict someone beyond a reasonable doubt.

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Sensor

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arrested for drunk driving.

But, O'Neill said, within 10 to 15 seconds the sensor can tell a police officer whether there is enough alcohol on the breath of a suspect to warrant closer attention and a full-dress breath test or a check of blood or urine.

In a demonstration last week, the sensor had no difficulty focusing on the breath of a reporter whose total intake of alcoholic beverages in the 24 hours before the test amounted to half a mouthful of beer, consumed about five minutes before the sensor was used.

When the sensor is turned on, it pumps a small quantity of the air around it through a small hole in the flashlight casing. The sample passes across an electrochemical fuel cell that measures its alcohol content. The measurement appears as a digital display, expressed in three decimal places — or within one-thousandth of a percent.

The prototype being circulated in the United States now was developed for the Insurance Institute by Lion Laboratories Ltd., a Welsh company, and Prototypes Inc., which has its headquarters in Maryland. O'Neill declined to say how much money the institute had invested in the program.

Still other types of sensors that use the same technology are either in use or under development in other parts of the world and a Japanese version, developed by the Honda automobile and motorcycle manufacturing company, has been tested by the Washington Metropolitan Police with only limited success.