

New Traffic Technology

Event Data Recorder

- Originally conceived and designed to gather air bag deployment information
- Information is now being used for other purposes
- Currently General Motors, Chrysler and Ford have contracted with Bosch Diagnostics to provide the reading unit and software

EDR Locations

- Under the Driver or Front Passenger Seats
- Under the center console behind the dashboard controls

What Type of Data is Collected?

- Vehicle Speed
- Engine Speed
- Brake status
- Throttle Position
- State of Driver's Seat Belt Switch
- Passenger's Air Bag Enabled or Disabled
- Air bag Deployment Information

Who is currently using the data?

- Automobile Manufacturers
- NHTSA
- Insurance Adjusters
- Vehicle Fleet Managers
- Accident Reconstructionists
- Law Enforcement
- Others . . .

Bosch Diagnostics 1-800-321-4889

The "Sniffer"

- Passive Alcohol Sensor
- Designed to formulate "probable cause" by functioning as an "extension" of the operator's nose
- Can detect alcohol in closed areas
- Can detect alcohol in open beverage containers

How does it work?

- Pump runs for 5 seconds and takes in a one cubic inch air sample
- Should be held 6-8 inches from the person's mouth
- Color coded bar graph with 9 LED bars

PAS "Clip Mate"

Where can it be used?

- Used at sobriety checkpoints
- School functions
- Workplace applications

PAS sensors at sobriety checkpoints increase officers effectiveness by 15-25% in detecting illegally impaired drivers.

-- PAS Literature quoting studies by the National Highway Traffic Safety Administration and the Insurance Institute for Highway Safety

Frye hearing in Kane County Illinois

- March 13, 2008
- Scientific Principles were approved
- Unit can be used for Probable Cause

Problems?

- Admissibility in Court
- Residual mouth alcohol
- Environmental effects on the sample
- Can get false readings from other sources
- Illegal search?

PAS Systems International of Fredericksburg, VA 800/660-SNIF

Global Positioning System

- GPS is funded by and controlled by the U. S. Department of Defense (DOD). While there are many thousands of civil users of GPS world-wide, the system was designed for and is operated by the U. S. military.
- GPS provides specially coded satellite signals that can be processed in a GPS receiver, enabling the receiver to compute position, velocity and time.
- Newer “receivers” also send a signal which allows for tracking and location data.

... the government also tracked them [defendants] using the OnStar global positioning system when they rented a vehicle with that equipment.

– U.S. vs Rorke, 2002 U.S. Dist. LEXIS 16258 (2002)

What other applications are possible?

- Determine speed of a vehicle
- Track probationers
- Track or Locate vehicles
 - Stolen vehicles
 - Fleet Services
 - Rented vehicles

Portable Breath Tests

- Generally contain a fuel cell
- When a sufficient sample enters the unit, alcohol is converted to acetic acid and electrons are released
- A signal is generated on the fuel cell as a result of the oxidation of any alcohol from the breath sample
- The resulting electric current is translated into digitally displayed concentration of alcohol

Lifeloc FC10 plus

- Passive mode
- Quick recovery
 - less than 30 seconds on positives

Procedure

- Give clear instructions on blowing
- Give 15 minutes before testing
- Repeat taking note of significant changes

Applications

- Roadside
- Youth / Underage Drinking
- Probationers

“Where the State does not attempt to use a portable intoximeter or Passive Alcohol sensor to establish a quantitative alcohol concentration factor, but only proffers the evidence qualitatively as another indicator of intoxication relied on by the officer, much like other field sobriety tests, it is not error to admit to admit that qualitative evidence of intoxication”

– George v. Texas, 1999 Tex App. LEXIS 738 (1999)

Limitations

- Admissibility?
- Residual Mouth Alcohol
- Illegal Search?

SCRAM Alcohol Monitor (Secure Continuous Remote Alcohol Monitor)

- Eight ounce ankle bracelet
- Measures sweat / non invasive
- Can test as frequently as every 30 minutes
- Bracelet radios the modem which dials in a report

Who is currently using?

- Probation/Parole
 - Driving While Intoxicated Defendants
 - Domestic Violence
 - Underage Drinking

- Bonding
- Drug/DUI Courts

Alcohol Monitoring Systems, Inc. of Highlands Ranch, Colorado

303/785-7821

Video Recorders

- Video Sunglasses
 - 640 x 480 resolution
 - 30 frames per second
 - 2.5 hour battery life
 - Length of video depends on card

Vehicle Alcohol Sensing

- DADSS – Driver Alcohol Detection System for Safety
 - Ignition Interlock
 - Optical Scan
 - Transdermal Test
 - Odor Sensors – Nissan
 - “Alcokey” – Saab