

Reinventing the Wheel / *The latest car technology*

Portable Devices That Help Monitor Older Drivers on the Road

■ **What Is It:** As baby boomers age, the number of elderly drivers is growing and so too are concerns about them behind the wheel. The Insurance Institute for Highway Safety estimates that people 65 and older will make up 22% of licensed drivers in 2030, up from 14% in 1999. As drivers age, deteriorating vision and slowing reflexes may make quick driving decisions harder for some. In response, companies are coming out with portable monitoring devices that can help give caregivers peace of mind when elderly drivers are on the road.

■ **How to Get It:** This week, Exmovere LLC unveiled a Bluetooth-enabled wristwatch embedded with sensors that monitor certain vital signs of the wearer (including heart rate and sweat levels), movement and 10 emotional states (agitation, for example, would be signaled by a high heart rate, low heart-rate variability and high sweat level). The Exmovere device, at www.exmovere.com, monitors the wearer at home and elsewhere by transmitting data every 30 minutes via a home computer, cellphone or a GPS-enabled personal digital assistant that mounts on the car dashboard. A caregiver can receive alerts either by instant message, text message or email about physiological readings outside the ordinary for the wearer (like an erratic heart beat) and emotional states (for instance, if the watch wearer has felt agitated for a prolonged period). On the road, the device can even tell where the wearer is located, if he or she exits a certain zone or is driving over or under a



Exmovere

Exmovere's wristwatch monitors vital signs and 10 emotional states.

certain speed. Gemini Technologies LLC (www.geminitracking.com) recently launched a personal GPS-tracking device that can be used as a cellphone and provides caregivers with its exact location. Caregivers can request locations online or via cellphone and get alerts if the device travels outside a certain area. Later this summer, the company plans to begin providing information about how fast the device is moving. A number of other companies like Alltrack USA (www.alltrackusa.com) offer similar products that are geared at monitoring teenagers, but could also be used for tracking older drivers. Others like Road Safety International Inc. (www.roadsafety.com) offer products that record information about the vehicle like speed or braking, but don't provide the data to caregivers in real time.

■ **Upside:** The new products may make it easier to prevent an accident, and find an older loved one when something goes wrong. Gemini Technologies' device has a panic button that

sends alerts to two predetermined phone numbers when pressed. Similarly, Exmovere's PDA for the car has an "SOS button" the driver can activate to reach a caregiver. With both products, the caregiver can go online to see where the watch wearer is located.

■ **Downside:** It could be hard to persuade loved ones to wear monitoring devices. The Exmovere system can't measure when crashes occur because it doesn't monitor features of the vehicle itself like air-bag deployment. It also can't monitor a driver's upper-body movements or detect whether the driver is drowsy, or has breathing problems, for instance. The wearer must stay within range of a receiver.

■ **Cost:** Most come with subscription plans. Exmovere charges \$750 extra for the in-car PDA kit, unless you opt for the 36-month subscription plan, which costs an upfront \$3,303 (that includes the \$99 watch and prepaid cellphone). The cheapest subscription, for six months, runs \$1,193, not including a phone or car kit. Gemini's device runs about \$250 plus a \$19.95 to \$44.95 monthly subscription, with the cost depending on how many times caregivers want to access location information.

■ **Comment:** Exmovere says its product is designed for older people and can't be used for other age groups like teenagers. That's because the algorithms used to determine emotions are specific for people 65 and older and age groups differ in how they show emotions. —Jennifer Saranow