

Accidental wireless: Wireless-based sensor system could SAVE lives

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Following a rollover automobile accident, driver and passengers are usually unable to call for help. So, unless the accident occurs on a busy road, rescue is unlikely to arrive in time to save them. Writing in the *International Journal of Intelligent Defence Support Systems*, US researchers describe SAVE, which could solve that problem and reduce deaths on the roads.

Debopam Acharya in the Department of Computer Sciences, at Georgia Southern University, in Statesboro, Georgia, and colleagues are developing a wireless Java-enabled automobile accident reporting system. The system could determine the nature of an accident, and automatically call emergency medical services for possible action.

"Prompt communication is crucial during life-threatening events, such as fire, floods, explosions and traffic accidents, and is especially true for vehicle rollovers and crashes," Acharya and colleagues explain. Indeed, rollover accidents are among the most likely to cause head injury, fractures and explosions in vehicles that would make it impossible for the occupants to summon help.

Similarly, motorcycle riders are also particularly vulnerable to potentially-fatal injury during accidents. The team also points out that situation can be even more treacherous for military personnel during training or maneuvers, as they who may be driving under particularly hazardous conditions off-road and in remote locations.

SAVE, Sun-java-based Automatic VEHicular accident reporting system, uses inexpensive sensor technology, including an inclinometer to detect rollover, and powerful wireless application technology to assess vehicle conditions. It can monitor vehicle incline, temperature, and record rates of deceleration, and airbag deployment. SAVE is also coupled to a global positioning system (GPS) device so that the emergency services can locate the accident quickly and easily.

"In the event of an accident, all this information can be transferred to the response specialists. A suitable combination of these parameters may lead to accurate analysis about the type and severity of accident and hence our system may be used in vehicles intended for different operations, civilian or military," the researchers conclude.

Article: "SAVE: a wireless java enabled automobile accident reporting system" by Debopam Acharya, Vijay Kumar, Gary M. Gaddis, and Nicholas Garvin in Int. J. Intelligent Defence Support Systems, Vol. 1(3), 254-270.

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