

Cell Phone of the Future Saves Lives

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Researchers at the University of South Florida's Center for Urban Transportation Research and Department of Computer Science and Engineering are working on cell phone applications that can help keep you safer, tell you when to evacuate from a hurricane and even let you help law enforcement prevent or solve crimes.

Your next cell phone, in addition to being a communication tool, may be a friend indeed when you are in need. That's thanks to the development of the Wireless Safety / Security System (Wi-Via), which can gather and distribute massive amounts of information and send it where it needs to go over the Internet and mobile phone channels.

"A number of convenient, personalized services are possible with these advancements," said Sean J. Barbeau, a CUTR researcher working with a team developing new computer software applications using "location-based middleware" and "remote method invocation."

According to Barbeau, the next cell phone generation's Global Positioning System (GPS) will have the capability to determine within three to five meters your position in the event of an emergency.

If a hurricane approaches, you can find out if you are in a mandatory evacuation zone. Likewise, bi-directional capabilities, like reverse 911 calls, can alert subscribers that they are in a hurricane evacuation zone as a storm approaches. Or, if you dial 911 and send a picture to a dispatcher, that dispatcher can see the image you have sent and can be in contact with you at the click of a mouse. It will also relay a picture or

video to first responders, who will be able to respond more effectively.

“The London terrorist transit bombings in 2005 demonstrated the value of citizens sending camera phone still and video images to authorities,” said co-researcher Phil Winters. “However, the images lacked geographic reference points and therefore the authorities were unable to tell where the images were coming from or how to contact the senders. Our system solves these problems.”

Wi-Via technology can also help law enforcement tracking missing children, Barbeau said.

“If an Amber Alert is issued for a missing child, a user responding to an alert could send a picture of a suspect and the suspect’s location to a 911-like center,” he said. “That picture could then be sent to other Amber Alert subscribers in the nearby area.”

Three communication aspects will be at work in what is called a new “location-aware, high-level architecture,” said co-researcher Nevine Labib Georggi.

“At the client side, there is a GPS-enabled cell phone or other mobile device which provides user location,” explains Georggi. “Second, there is the cellular network and the Internet, which will transport the data to the third aspect of the architecture, the server that will implement the service. This system provides the possibility for third-party application providers to offer new and innovative location-based services to the mobile community at large.”

Source: University of South Florida, by Randolph Fillmore

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