Researchers develop new bushfire warning device

January 21 2010

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A new, low-cost bushfire detection and monitoring system is being developed by University of Adelaide researchers using mobile communications technology.

The same technology used to send SMS messages on mobile phones

could be used to develop an efficient and cost-effective early warning message to authorities and people living in fire-risk areas, according to researchers from the School of Electrical and Electronic Engineering.

In two papers published this month in the *International Journal of Computer Aided Engineering and Technology*, researchers explain how temperature and humidity sensors connected to a micro circuit can interface with a GPS receiver to warn of impending bushfires and monitor existing ones.

Senior researcher Dr Said Al-Sarawi says incorporating the remote monitoring system with current and new homes could help prevent bushfires or at least minimise their impact.

"There are numerous alarm and monitoring systems on the market which rely on computers, satellites and humans to detect bushfires, but they all have various shortcomings," he says. "We need a cost-effective system which can be tailored to a number of communication mediums."

The bushfire monitoring device would cost less than $500 to build, according to Dr Al-Sarawi, and could be used in any place where mobile phone coverage is accessible.

"An alarm message would be transmitted to a mobile phone or SMS server and would be a fully automated process, without having to rely on people.

"The proposed system can operate independently and for a number of years using solar-powered energy. Its running costs would be very low, with an efficient and accurate exchange of information," Dr Al-Sarawi says.

"The only limitation is that it requires the availability of mobile phone

coverage."

In a parallel research project, the same team is looking at the potential of wireless-based technology to monitor a property or bushfire site remotely, rather than receiving SMS status alerts.

"By using both mobile networks and the Internet to collect data from different sources, we could develop a much more effective detection and monitoring system," Dr Al-Sarawi says.

Provided by University of Adelaide