Tapping cell phone technology for swifter rescue missions

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Credit: AI-generated image (disclaimer)

Avalanches and earthquakes can be highly unpredictable - and all too often deadly, as the recent tragedies in Pakistan and the Philippines have shown. Increasing urbanisation, especially in developing countries where building regulations tend to be weaker, also means that the potential for human fatalities is higher.

Furthermore, Search and Rescue (SAR) operations are expensive, and somewhat limited given the current tools at their disposal. Many of these tools are highly complex, and require intense training or the deployment of specialised teams.

When disaster strikes and a quick, effective response is needed, this represents a significant limitation. Trying to retrieve people from an avalanche or, say, a collapsed building, means that every minute matters.

The aim of the EU project RESCUECELL, which began in 2013, has therefore been to address this weakness, through the development of cost-effective, robust and lightweight technology that can easily be transported to an affected zone. A consortium of eight companies has successfully identified an innovative way of detecting mobile phones of people buried in avalanches, earthquakes and collapsed buildings, and is now looking to bring a viable product to market.

By the end of 2015, the team will have developed a prototype of a novel portable kit for emergency search services, which will be able to locate missing people swiftly and accurately. This will mean more survivors and a reduction in SAR-related costs.

The system is designed to be simple to use. It guides rescuers by first indicating how to spread the nodes in order to provide the best coverage of an affected zone. It then gives precise indications of the location of buried people. In this way, the system will be able to complement and improve existing techniques, such as the use of sniffer dogs.

RESCUECELL is a Research for the Benefit of SMEs project, with a budget of EUR 1.4 million. The European Commission, through the FP7 financing programme, has provided EUR 1.1 million to co-fund this project.

The bottom line is that this technology has the potential to save lives. Since 1900, avalanches claimed 1,201 lives in Europe, affected 13,199 persons and cost EUR 775 million in damages. From 1998 to 2009, earthquakes took 18,864 lives and caused over EUR 29 billion in damages in Europe. This is why both the consortium and the Commission believe that RESCUECELL is very much worth the investment.

More information: www.rescuecell.eu/

Provided by CORDIS