TECHNOLOGY FOR LOCATING INJURED PEOPLE IN AREAS WITHOUT MOBILE PHONE COVERAGE

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RESUMEN

The technology developed by researchers at the University of Alicante allows the use of a smartphone to locate people injured in remote environments where there is no mobile phone coverage (GSM/UMTS). The smartphone emits a Wi-Fi signal that acts as a distress beacon and can reach a distance of several kilometers.

The system allows to locate exactly the injured and can be implemented on any Android smartphone model.

This technology is especially suitable for situations where there is no possibility of establishing communication using mobile phone networks and where speed in the rescue is essential to save lives. Two areas have been identified where the system can be vital: rescue of people in high mountain and sea rescue (man on the water).

VENTAJAS Y ASPECTOS INNOVADORES

TECHNOLOGY ADVANTAGES

The main advantages of the technology are:

- Users do not need to purchase a specific device to emit a distress signal. Any smartphone that incorporates the App can emit the signal.
- The receiving devices of rescue teams have a low cost.
- The weight of the receiving devices is also very low. Can be carried in a backpack.
- No mobile phone coverage is required.
- The signal can be emitted for hours or even days. It can be disabled the rest of services on the smartphone to save battery, increasing the duration of the signal.
- The signal can be configured, incorporating relevant data such as the GPS coordinates of the accident, the identification of the person or a small message about the type of accident.
- The signal can be detected from long distances, depending on the orography of the place from which it is emitted. In recent mountain tests the signal was detected about 3 kilometers away.
- It allows an injured to continue transmitting a distress signal even if he/she has lost consciousness or loses mobile phone contact with the rescue teams.
- In situations of bad weather conditions (blizzard, fog) or night time, it is possible to locate the wounded with great precision, without having to make eye contact.

INNOVATIVE ASPECTS OF TECHONOLOGY

The main innovation of the technology is that it allows to use a standard device that we usually carry with us and provide it with specific functionality for emergencies.

The system facilitates the work of rescue teams, saving time and costs in rescue operations, and focusing on tracking in more specific areas.

In short, in extreme cases, it increases the chances of survival of the injured.

APLICACIONES DE LA OFERTA

This technology brings added value fundamentally in the following circumstances:

- When there is no mobile phone coverage.
- When the speed in accessing the injured is vital to save his life.
- When there is difficulty in locating the injured because of adverse weather conditions or poor visibility.

An area of specific application have been detected where this technology would be vital to save lives: **high mountain rescue**.

Frequently it happens that hikers who practice mountain sports suffer an accident or get lost. These people are usually equipped with a smartphone but there may be no mobile phone coverage.

In these cases the operative is to start their search when they are missing and a search is made based on the visual contact or sound signals. When there are extreme weather conditions, the chances of survival fall considerably and it is very difficult to locate people even if the rescue teams are close to the injured.

The technology developed allows to optimize the searching and reduce the tracking time. In situations with bad weather conditions (blizzard, fog) or even at night, it allows to locate a hiker with great precision.

COLABORACIÓN BUSCADA

Companies interested in acquiring this technology for commercial exploitation through licensing agreement are required.