infsoft
smart connected locations

Dead Man Control via Indoor Positioning

AT A GLANCE

- indication of the ability to act through feedback
- motion detector in the form of a Beacon wristband
- Unconsciousness: automated emergency signal with location transmission

gether with the unconscious employee's position data.

SERVER-BASED SOLUTION

The server-side solution in this application is a kind of motion detector. Each laboratory employee carries a beacon in the form of a bracelet. These beacons respond to motionlessness. In this way, it can be checked whether a person is incapable of acting or not. If the arm has not moved again after a certain time, a pre-alarm is triggered. If the user does not respond, an emergency signal is sent to the security personnel with the employee's position data.

PROBLEM DEFINITION

In a chemistry laboratory, many employees conduct research until late at night, often alone in their most remote offices. If an emergency situation arises in such a situation, the affected person is usually left to himself/herself. If he is still conscious, then it is usually possible for the affected person to make an emergency call via mobile phone, but if he is not conscious, it can be too late. This problem can be effectively counteracted by means of location and alarm portal, with dead man's switch.

SOLUTION

In this application there are two types of solutions:

CLIENT-BASED SOLUTION

An app can contribute to occupational safety at individual workplaces or at workplaces with dangerous machines. By pressing the button On the smartphone, the app signals that the user is still capable of acting and therefore no programmed action is carried out. If the key has not been pressed after a certain time interval, an automatic signal is sent to the security personnel in the form of a call or an alarm, to-

TECHNICAL IMPLEMENTATION

With the client-side solution, it is necessary for the user to install an appropriate app on his smartphone. In addition to the app, Bluetooth Low Energy Beacons are required, which can be easily mounted on the walls.

Due to their high flexibility and accuracy, the Beacons are a popular hardware for indoor position determination. The smartphone receives the Bluetooth signals from the beacons installed in the building and uses the signal strength measurement to determine its position. If desired, the device can also transmit the data to the infsoft LocAware platform®, where it can be intelligently processed.

In the server-side solution, all employees carry a Bluetooth Beacon in the form of a bracelet. In contrast to the client-side solution, infsoft Locator Nodes are mounted on the walls. These locator Nodes recognize the signals of the beacons and transmit the data to the infsoft LocAware platform®, where they are processed in real time and the position is displayed on a map. The security personnel can then see the unconscious employee's location in a smart-

phone or browser application and can thus help the person. Optionally, a return channel for contacting endangered persons can be realized.