



In an emergency: Send a discreet alarm at the touch of a button

Case study: Professional Fire Department Aachen, Germany

If any threat occurs, the Aachen Fire Department provides its emergency responders with a facility to quickly and discreetly alert the control centre via a RES.Q SOS terminal and the SOS-Portal. This system has proved its worth in practice and aroused interest in other city departments.

However, this emergency call system was not the perfect solution. «In the event of a threat situation, the emergency forces on site need to inform the control centre about the incident as quickly as possible, but without having to get out a mobile phone and dial an emergency number.»



«Although our system has only been in use for a short time, we have already received various enquiries from other city departments»

Frank Hahn, Head of the radio workshop

Tests using the SOS portal

As a result, the Aachen fire department decided to run tests using Swissphone's RES.Q SOS emergency call terminal. As well as a POCSAG module, the proven RES.Q hardware terminals are also

«Angry relatives hinder paramedics», «Ambulance attacked». These and similar headlines are appearing ever more frequently, and every rescue service will confirm it is now a common occurrence for the emergency services themselves to be in need of support.

First step: A separate emergency mobile phone

The city of Aachen's professional fire department (see text box) responded proactively to this developing phenomenon. As Frank Hahn, Head of the radio workshop, explains: «After an increase in the number of incidents in 2014, we issued emergency mobile phones to our emergency responders.» Using these mobile phones, members of a rescue team could contact their control centre via «112» and request help.

Aachen and the fire rescue service

The city of Aachen is located to the west of North Rhine-Westphalia within a «border triangle» with Belgium and the Netherlands and has a population of around 255,000. The fire department operates its control centre not only for the city of Aachen, but also for nine surrounding cities and municipalities in the Aachen region. As is customary in Germany, Aachen's fire department runs the rescue service on its own, and the municipalities in the surrounding area work together with them in a partnership arrangement.

equipped with a cellular module. And furthermore, the RES.Q SOS terminals incorporate an additional emergency signal button, which when pressed activates the Swissphone SOS-Portal. From there, depending upon the requirements of the user, an emergency call can be sent via SMS or e-mail to the addresses specified by the rescue service. And because RES.Q terminals are also equipped with GPS, emergency calls transmitted via the portal include the exact position data displayed on a map, as well as the ID of the rescue vehicle. This allows an emergency call to be immediately associated with the individual and their location.

Discreet emergency calls without a pre-alarm

The rescue services were very happy with the outcome of the tests. Frank Hahn comments: «The reaction speed is very fast and the position data is very accurate.» The terminal and portal are seen as extremely practical, and thus have received a positive acceptance: Emergency responders always carry their paging device with them, so no second device is needed, making this an ideal solution.

The rescue services see the discreet alarm as a further advantage: The emergency call is triggered via a keystroke, and the sender receives unobtrusive feedback that the alarm was sent. Frank Hahn says: «We deliberately avoided a pre-alarm. If colleagues need to send an alert, it must be quick. And the alarm should be able to be triggered unnoticed, otherwise the situation may continue to escalate.»

As soon as the alarm is processed by the control centre and further emergency services are dispatched, the Aachen control centre sends confirmation to the emergency responder that his emergency call was received. This information is conveyed silently by a vibration. Frank Hahn again comments: «Thus the rescue force knows that help is on the way. In a difficult situation, this is an important piece of information which is highly valued by rescue workers.»

Simultaneous operation: The introduction of the hybrid alarm

As a result of these test outcomes, the introduction of the SOS-Portal and hybrid alerting took place simultaneously. This kind of parallel alerting via POCSAG and mobile networks creates greater redundancy and thus even more secure message reception. The system also provides feedback to the emergency responders about whether or not an alert has been received, which supports them in their task. This approach makes a better job of ensuring that the required quota of emergency services will always be on site.

Enquiries from other municipal departments

The Aachen Fire Department is the first user of the RES.Q SOS and the SOS-Portal in North Rhine-Westphalia. At first, all rescue vehicles were equipped with appropriate equipment, and currently the latest RES.Q terminals are being rolled out to all emergency responders.

The evidence shows that the use of the portal is not purely a preventive measure: In 2018, the city of Aachen reported 20 incidents of attacks and assaults upon employees in the emergency services. So without question a fast and discreet alert is a desirable form of protection. And, as Frank Hahn points out, this does not just apply to rescue teams: «Although the system has only been in use for a short time, we have already received various enquiries from other city departments. Regulatory agencies, social services and enforcement officials are also interested in the SOS-Portal and have asked about our experience.»

Express-Alarm® encrypted network

Since 1991/92, the professional fire department has operated a Swissphone digital alerting network, which was then extended in 2012. Today, 30 DAUs are deployed throughout the Aachen region, including nine with a master function. This is a DiCal IDEA encrypted network which can accelerate calls via the patented Express-Alarm® process – both of which are important rescue service requirements. The terminal devices used are RES.Q terminals, and the number in service is currently being increased. In 2017, Aachen's rescue services were called out 49,500 times, and 5,760 of those incidents also required an emergency doctor.

Components of the Swissphone solution

Hardware

- RES.Q

Software

- SOS-Portal
- IDEA encryption
- Express-Alarm®