eurofunk

news

ISSUE
Nº 02

THE FUTURE OF ECALL AND IT SYSTEMS IN THE CONTROL CENTER ENVIRONMENT

One of the many topics you will find in this issue

WORKSTATION VERSATILITY

Adding Softclient to main workstations

INSTANT MESSAGING

Messaging services in the control center environment

ELDIS MANAGEMENT SUITE SERVICE PLAN

A module with wide-ranging capabilities

eurofunk is ready for the challenges of the future

Now that emergency control centers for the emergency number 112 have been equipped with eCall evaluation systems, a process that was made more complicated by tight deadlines, state funding and the prospect of additional certification, everyone is curious to see how eCall volume will develop in the future. At present eCalls are few and far between but are expected to gain momentum over the coming months and years.

Currently, the upcoming conversion of emergency lines to "all IP" is at the center of attention. This affects all control centers that handle emergency calls nationwide. And the clock is ticking. There is much yet to accomplish such as standardizing the new interfaces, making them available to the network provider and ensuring their implementation. The plan is to have this completed for all control centers by 2020.

eurofunk is cooperating closely with all parties involved to convert control centers as quickly as possible. This is dependent on network providers installing the necessary IT connections. In the past few months, we have had our first experience of alerting emergency services using digital radio. Here, TETRA pagers were addressed using the command and control system and notified via the TETRA infrastructure. The tests were positive and we look forward to seeing how quickly this new type of alerting will catch on with emergency organizations.

Whether Russian hackers helped the enthusiastically tweeting US President into office is a secret we may never learn. One thing is patently clear, however: as our IT systems become more open to the Internet, they also become more sensitive. At the same time, we, the end user, become more dependent on their reliability. We are all called upon to make IT security a priority. Several years ago, eurofunk completed a company-wide ISO:27001 certification and will extend this to include the requirements of the BSI Standards. Our goal is to ensure the same level of security within our company that is required of control centers and their infrastructure.

"As our IT systems become more open to the Internet, they also become more sensitive. At the same time, we, the end user, become more dependent on their reliability."

Dr. Christian KAPPACHER – Managing Director

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LATEST

IN PRACTICE

PRODUCTS, SERVICES

Looking Back at the Past Year

In eurofunk NEWS 2017 we spoke about our nomination for **Company of the Year 2017** by the Salzburg Chamber of Commerce. Besides taking first place in this category, we were the first company ever to be nominated in two categories at the same time and were able to reaffirm our high quality and the innovative spirit of our employees by taking third place in the category **Innovation.** And these two awards were just the kick-off in a year full of exciting and successful events.

In November 2017, the Salzburg Chamber of Commerce held their second award ceremony. Once again, eurofunk took part. In this, our third nomination, we took home the coveted trophy as Salzburg's **Apprentice Employer of the Year 2017** ("Lehrbetrieb des Jahres 2017") in the Large-Scale Enterprises category. So, you could say that the saying "all good things come in threes" came true twice for eurofunk in 2017.

Being honored as the Apprentice Employer of the Year fills us with immense pride, as it shows that our efforts to give our apprentices excellent on-the-job training are perceived outside of the company as well.

In the first half of 2018, eurofunk was elected **"Winner Born of Passion"** ("Sieger aus Leidenschaft") by the Commerce and Trade department of the Austrian Chamber of Commerce. The Austrian Federal Fire Service Association also honored us as a **"firefighter-friendly employer"** in the first half of 2018. We are proud that many of our employees volunteer to keep the public safe and are happy to support them in their mission to help fellow citizens who are in need.

Our participation in the "business2run" charity sports event in April 2018 shows that we are not a bunch of lone wolves but one big community with a strong team spirit. Fielding 14 teams consisting of 3 runners each, we were the largest group amongst almost 200 participants from 73 companies. One of our women's teams actually finished in third place and succeeded in qualifying for the Austria-wide final.

We would like to take this opportunity to thank all our customers, partners and employees. Your contributions and loyal partnership are what make all these successes possible.

Dejan VUKOVIC

Image 2: Apprentice Employer of the Year 2017

Image 1: The business2run charity sports event

Image 3: Firefighter-friendly employer

It All Starts with a Signal

Someone needs help in an unfortunate situation? Sensors are showing a problem or alarms have been triggered? These kinds of events will generate an acoustic signal in the control centers that indicates the need for the assistance of trained, experienced security personnel. To make things as easy as possible for the front lines, Eurofunk has been working together with the Salzburg University of Applied Sciences in a project to develop sound components for various types of signal. The aim was to improve the auditory perception of signals and allow a direct allocation of priorities and meaning.

Even if the issue of notification seems trivial at first, the ability to process signals is a crucial component of incident handling. Notification is, in fact, one of the more complex control center functionalities.

Eurofunk command and control solutions offer a variety of signals. These have been divided into optical and acoustical components which can be configured individually. They can also be assigned to work flows or measures as necessary.

To process the large number of varying signals - and the information they contain - it takes more than just optical and acoustical differentiation. An intelligent, customized management system regulates who, how and when information is received.

As mentioned, numerous signals are attached to each role (call takers, dispatchers, administrators, etc.) and not every signal is relevant to everyone. Providing the individual user with the specific information they need to fulfill their tasks becomes a priority.

Simple distribution procedures, such as round robin or random, are not suitable here. Rather, signals need to be distributed according to the following criteria:

- **Control center** (for central control centers)
- **Organization** (for integrated, combined control centers)
- **Workplace**
- **Regional responsibilities**
- **Type of signal** (emergency call, detector, talk request, reminders, etc.)
- **User role**
- **User**
- **Incident** (who is currently handling the incident that the signal belongs to?)
- **Caller line** (who accepted possible previous calls from this number?)
- **Qualifications** (e.g. language skills)

Our work is not finished with intelligent signal distribution. We still need to define what should be done with the various signal conditions (incoming, escalation, acceptance, termination) within the system.

Here are a few possible examples:

- How often should the acoustic notification occur?
- Does the signal need to be combined with dead man monitoring?
- Does an incident need to be created automatically upon call acceptance (indicated by a certain type of incident, keyword, object or other pre-filled information)?
- Do measures need to be carried out automatically when the signal comes in or upon acceptance?
- Does the signal's basic information (detector number, vehicle ID, etc.) need to be augmented by configurable queries in the master data or incident data?
- What needs to happen if the signal is not accepted after a certain period?

Christian REPASKI

When it comes to signal optics and acoustics, there are no limits. Some control centers may use unusual sounds, such as animal noises or drum rolls. The possibilities are endless. The variation can distract operators however, by increasing noise levels in the control center. A pleasant acoustic backdrop in the control center contributes substantially to lower stress levels; excessive individualization can be counterproductive. Many control centers prefer to go without acoustic components for certain signals, but this may lead to a situation where some signals go unnoticed. The signal components that were created in cooperation with the students of the Salzburg University of Applied Sciences allow the urgency and significance of individual signals to be perceived better than ever before.

eurofunk command and control solutions offer options that are tailored to the notification and incident processing of each control center. As, theoretically, there are no limits to this individualization, we suggest going with a maxim that applies to many areas of life: „Keep it simple!“

> “Notification is, in fact, one of the more complex control center functionalities.”

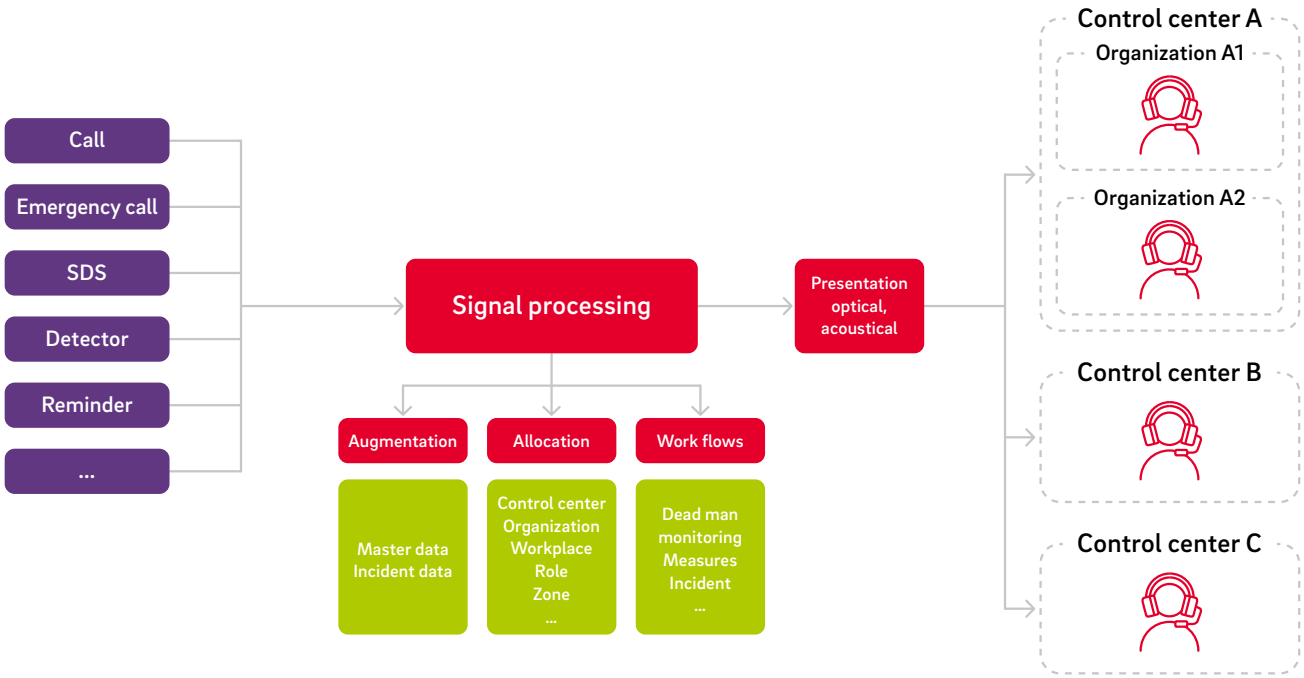


Image 1: Signaling

Graz Professional Fire Services and eurofunk – THANK YOU for 20 Years of Loyalty

"Prompt, uncomplicated and unbureaucratic service, often beyond the scope of existing contracts, characterizes more than anything else our cooperation with eurofunk as a supplier."

Mag. Dr. Klaus BAUMGARTNER, fire chief with the Graz Professional Fire Services

In 1998, the fire detection center of the Graz Professional Fire Services went into operation at their Lendplatz location, equipped with eurofunk's command and control system technology. The project was implemented with an eye to "integrating all systems necessary for operating a command and control center into a homogeneous IT infrastructure that can be operated intuitively". According to Karl Fürpaß, head of the division responsible for communications engineering at the Graz Professional Fire Services, "We awarded eurofunk the contract due, among other reasons, to their extensive expertise as a full-service supplier of command and control systems."

The scope of services includes:

- Incident management and communication technology
- Radio systems
- In-vehicle data terminals
- Media equipment
- Station alert
- Administrative software for post-incident processing and reporting

For Dr. Klaus Baumgartner, fire chief at the Graz Professional Fire Services, two aspects are of utmost importance: that the fire detection center be available to the local citizenry at all times, and that the control center technology function properly.

Operational safety is guaranteed by the Maintenance and Service Agreement, which took effect when the technology went live. The agreement was tailored to the specific requirements of the Graz Professional Fire Services. Some tasks are carried out by the technical personnel of the Professional Fire Service's division for communications engineering, which can, in turn, reduce the costs of operating the system. This also shortens repair and recovery times in case of system error. In situations that require assistance from eurofunk, technical support can be made available immediately via remote maintenance or is carried out quickly on site within the scope of the current Service Level Agreements.

According to Dr. Baumgartner, "prompt, uncomplicated and unbureaucratic service, often beyond the scope of existing contracts, characterizes more than anything else our cooperation with eurofunk as a supplier."

All of us here at eurofunk would like to say thank you for this long-standing and close partnership and the trust that has been placed in us!

Stefan HUTTER

Customer Portal my eurofunk

In the last issue we were pleased to introduce our new corporate design. Focusing on easy navigation and the clear presentation of eurofunk's solutions, this fresh look now graces the pages of our website.

COMING SOON

With the website comes our new customer portal – **"my eurofunk"** – offering new methods of collaboration with customers and partners.

my eurofunk is an application-based portal that can be tailored to your individual needs. In future, you will have easy access to applications such as HelpLine or SharePoint and be able to switch conveniently between them.

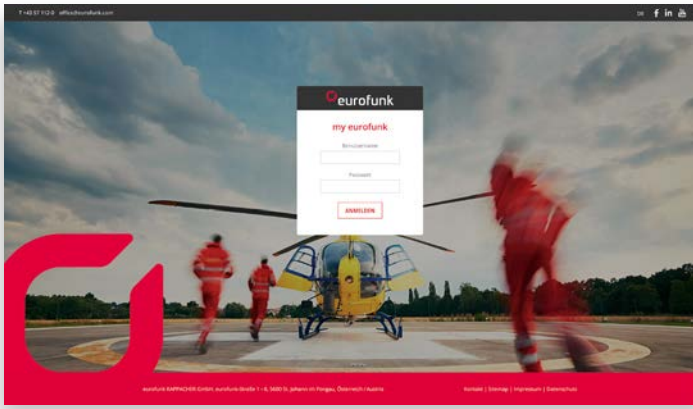
HOW DO I ACCESS THE "MY EUROFUNK" CUSTOMER PORTAL?

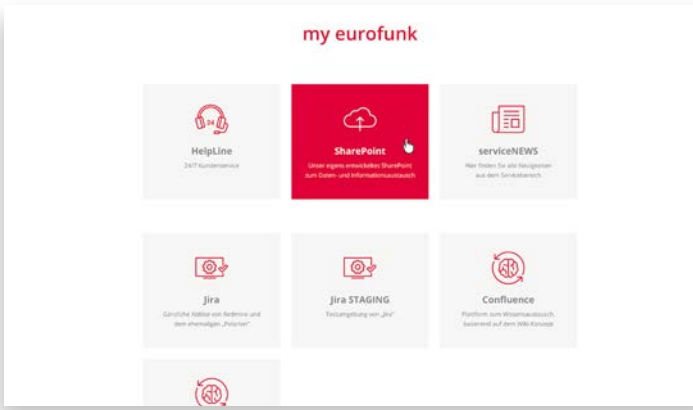
You can access the log-in area via the eurofunk website, either by clicking **"Log in"** in the header or via the menu item **"SERVICE – Customer portal".**

Once you have registered, you will have access to your personal **"my eurofunk"** page.

The customer portal allows single sign-on for all shared applications. This gives you centralized, quick and structured access to all your applications. Once you click on the relevant icon, your chosen app will open in a new window, keeping the customer portal page open in the background for easy navigation between the apps.

If you do not yet have your log-in details or have general questions surrounding "my eurofunk", please contact the eurofunk service team – we are always happy to help!





Laura BUCHEGGER

Increasing the Versatility of Workstations

The soft client is a cost-effective addition to main workstations and contains a simplified version of the IDDS UCiP workstation software. It is easy to install and designed to run on desktop PCs or laptops. The soft client is used in workstations that are located outside the main control center area (e.g. situation management rooms) and/or for workstations that are only occupied in exceptional situations.

Johann DOPPLER

As a purely software solution, the soft client can be installed on desktop PCs or notebooks and supplemented with the hardware components eTalk and eHAP if necessary. Central to the main control center are the comprehensive workstations that provide additional hardware. Examples include acoustic solutions, the capacity for more than three loudspeakers, or touchscreen capability and control center desktop for easy access to in-desk devices (e.g. to mute the built-in radio during active conversations).

SOFT CLIENT

The soft client offers unlimited versatility. Just like a main work station, the soft client is connected directly to the system and runs on the same software. This means that functionalities such as emergency call handling, radio call handling and short-term recording are fully functional. The soft client can also be expanded. As soon as a feature becomes available for the main workstations, it will also work on the soft client.

The only exceptions are workstations that do not have certain hardware components. For example, it is not possible to connect eight loudspeakers to a laptop to operate eight physically independent audio channels.

In addition to the original soft client solution, eurofunk has developed the hardware components eTalk and eHAP, both of which can be used individually. →

Increasing the Versatility of Workstations

eTALK

eTalk and eHAP are the framework for eurofunk's customised conferencing solution. The eTalk component is placed on the desk and operates two separate loudspeakers. The eTalk is also connected to an internal or external microphone with a visual level display and touch buttons that are used to activate the talk button, adjust volume or select speech channels. A swanneck microphone can be added directly to the eTalk component to enable hands-free speaking. The eTalk component is connected to the soft client, which runs on a conventional desktop PC or laptop. It has been specifically designed for emergency call and radio call handling and is intended for round the clock operation. Both eTalk and eHAP are compatible with the communication systems IDDS UCiP and emc² VOIP by eurofunk.

eHAP

The eHAP has been designed specifically for radio call and emergency call handling with a microphone, earpiece and an easy to use PTT (push to talk) that are housed in a robust casing. The eHAP component is available in two versions: the eHAP with its unique interface allowing optimum connectivity with other eurofunk components and the eHAP USB model with a USB interface. The handset is compatible with the communication systems IDDS UCiP and emc² VOIP by eurofunk.

The eTalk component is equipped with:

- **3 independent audio channels**
  - Hands-free microphone and loudspeakers for active conversation (integrated)
  - Monitoring speaker (integrated)
  - Optional connection for one additional external loudspeaker, (e.g. for call signals and short-term recording playback that do not require the monitoring speaker)
- **PTT button, volume control, mute microphone**
- **Modern touch sensor technology**
- **Mike sound level indicator**
- **Connectivity for**
  - A handset (e.g. eHAP)
  - Up to two headsets (e.g. for teacher/student operation)
  - Further periphery such as footswitches and Andon lights (e.g. for free/busy light indicators)

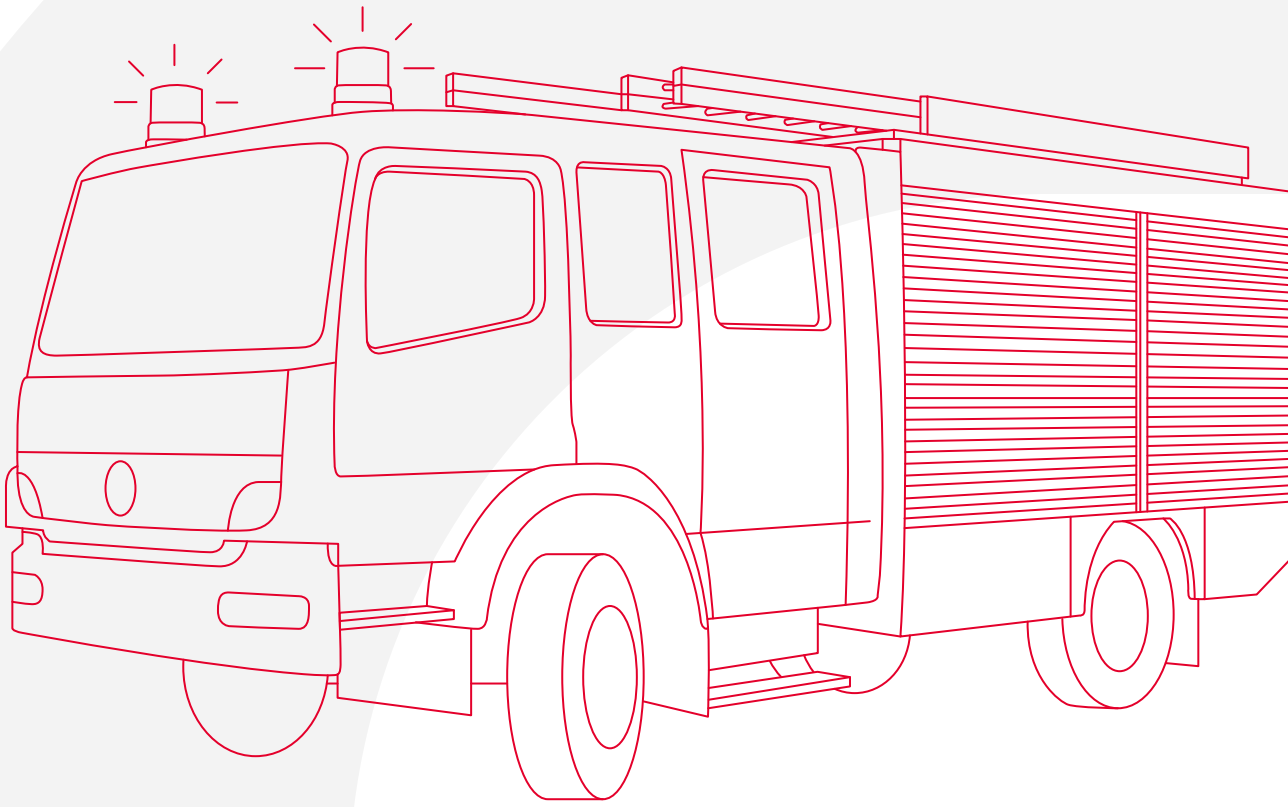
ILS Oberland-Weilheim – Pilot Project for the TETRA Alert Process

Brigitte FRITZENWALLNER

Generating interest in the Bavarian media this year is the subject of the TETRA alert process. During regular operations, ELDIS 3 executes the alert with the use of two TETRA gateways, or TEGAs. During fall-back, the alert is carried out by a defined fixed radio terminal (FRT).

After undergoing a thorough quality assurance test at the Fire Academy in Geretsried, the TETRA alert process was integrated in the ILS Oberland-Weilheim during running operations. In close co-ordination with the Diginet project group, functionalities were tested and fine-tuned until requirements were met.

Once retrofitting of the pilot control center was completed, further quality assurance measures were carried out. The control center and the Diginet project group joined forces for a comprehensive testing phase concluding with the transition to the large-scale test. Here, extensive test scenarios were carried out across the Oberland-Weilheim Control Centre region. This was the final hurdle needed for approval to roll out the TETRA alert process to all Bavarian fire and rescue control centers.



Where are you? – Automated Caller Location for Control Centers

Caller location is one of the most important aspects of emergency handling. Technical advancement in this field is helping control center personnel to detect locations faster and with greater ease and accuracy than ever before.

Martin JÖRG

eCalls are gaining steadily in importance for several reasons, among them the transference of location data. This occurs in accordance with "TR Notruf", the technical guidelines for emergency calls in Germany. In Austria eCalls are important for locating the emergency by pinpointing the position of the caller's cell phone.

The current situation in control centers is, however, anything but ideal. Even if the locations transferred by eCalls are relatively exact using GPS, the number of incoming eCalls in the control centers is still very low. Unfortunately, this situation isn't due to change any time soon. The EU mandate for automated emergency systems applies only to vehicles registered after 31 March, 2018. In addition, eCall cannot track emergency calls made from conventional cell phones, as eCall is limited solely to use in vehicles.

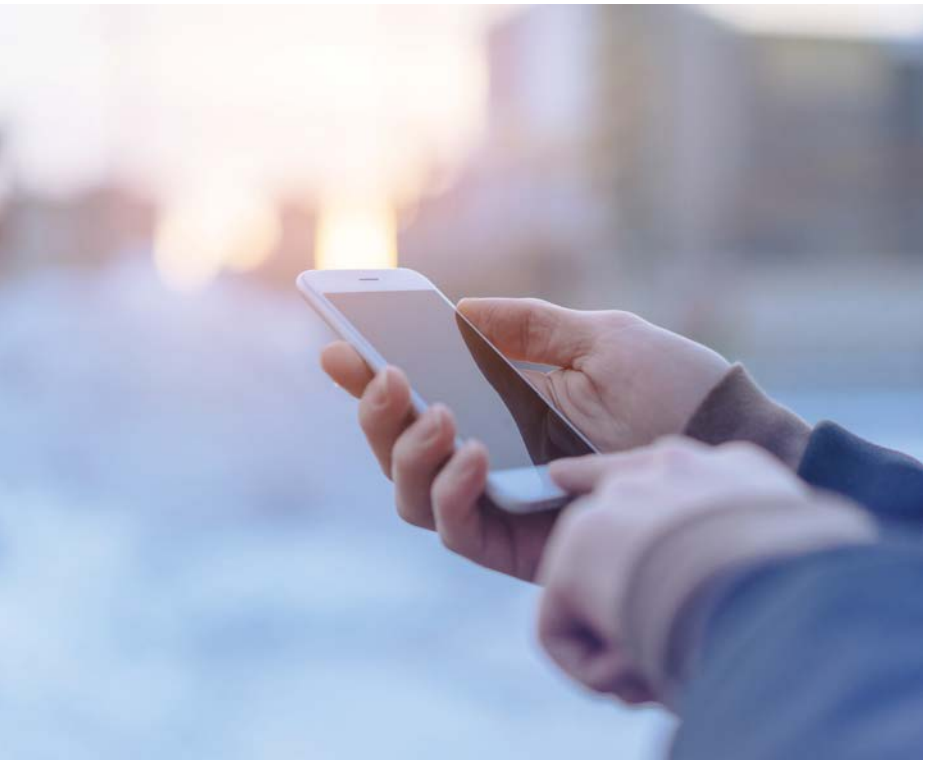
Emergency call location data and cell phone tracking is problematic, as the location data transferred to the control centers is often imprecise. Locations are currently determined almost exclusively by the provider and the provider's network infrastructure. Data from end devices, such as GPS receivers or WLAN, are not included in these methods and the accuracy of location detection is reduced to a range of several kilometers.

Other methods of caller location promise a significant improvement for the control centers. One of these procedures sends the emergency caller a text message with a link (Internet address). When the link is opened, the control center can determine the caller's location with the help of their cell phone.

Services like this are either offered by providers (e.g. Smart Locator or Convexis) or are implemented by the control centers themselves. Often, these solutions offer additional functionality such as the ability to send photos. While the advantages are clear, certain limitations such as an available internet connection or the enabling of location determination via browser, make these options impractical for many users.

For this reason, Advanced Mobile Location (AML) is increasing in popularity. AML is a worldwide initiative – driven primarily by Google – to eliminate the problem of cell phone location in an emergency situation. After an emergency number has been dialed, phones that support AML automatically send several text messages containing data with the cell-phone's current location. In doing so, the phone's GPS receiver is activated and available wireless networks are used for localization. Why several text messages? This is an effort to increase location accuracy as more exact data becomes available to the system. User interaction is not required; all activities are carried out automatically in the background. →

Where are you? – Automated Caller Location for Control Centers



Evaluations from Finland have shown that in 77 % of all cases, the accuracy of the transferred data is within a radius of < 50 m. Three to four location text messages are required to achieve this accuracy.

AML is supported by cell phones using the Android operating system from Version 2.3 and higher. Consequently, 99 % of all Android telephones support AML, according to statements by Google. Google itself is constantly improving functionality as part of the "Emergency Location Services" (ELS) project and aims to deliver better data in future, especially indoors, by using existing wireless network information (e.g. information on the level of the building).

Apple cell phones with iOS version 11.3 and higher (iPhone 5 and later models with updated operating systems) are also AML enabled.

Countries such as Great Britain and Finland have large-scale AML trials already behind them. In Austrian and Germany AML data are not yet transmitted to control centers comprehensively. In Germany, a pilot scheme is currently underway at the integrated control center in Freiburg and eurofunk has already tested and implemented the prototype of an interface for the AML endpoint at this location. The system has yet to go live; data protection law has made information transfer a legally sensitive issue. Providers such as XLAB with their Smart Locator app also offer the transfer of AML data for control centers.

Based on the advantages and the widespread use of AML-enabled cell phones, we are convinced that AML data will soon become a must-have for control centers. Whether this will occur through providers or a central non-profit institution is currently not clear. However, this technology will make tracking emergency calls via cell phone much easier in future.

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Instant Messaging Services in the Control Center Environment

Christian REPASKI

Today more than ever, control centers are a collection point and hub for the exchange of information, both in the public and the industrial sector. Previously, information was exclusively exchanged verbally. Nowadays the demand to exchange data-related information both amongst emergency services themselves and with the control center using instant messaging services is increasing.

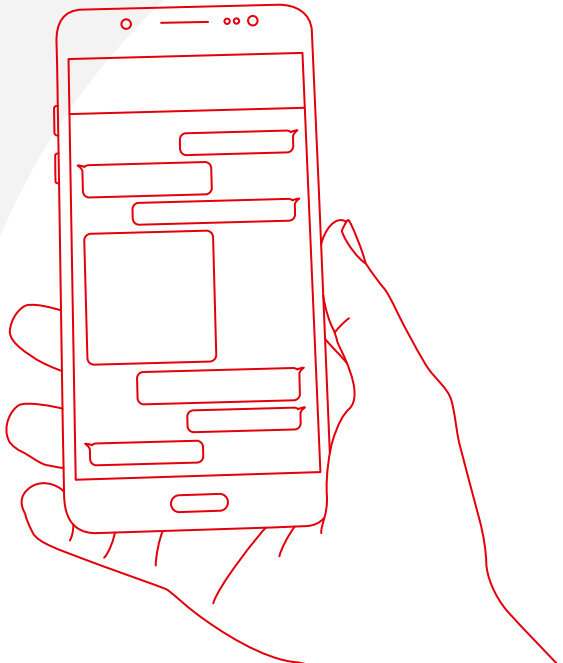
Broadband networks such as 3G, LTE and 4G are increasingly becoming widely available. The outlook for the upcoming mobile radio standard 5G promises the ability to define application-specific slices. These developments will give rise to new possibilities for emergency organizations using smart phones and other mobile devices.

Public instant messaging services, currently used in the private sector, like WhatsApp or Telegram offer many advantages such as E2EE and end-to-end encryption of transferred data. This is why emergency service personnel often use them on their personal smart phones when they are on duty. Aside from the undisputed added value, using these public instant messaging services raises the question of data protection and reliability/ availability. In the past few years, a market has grown up that specializes in the development of mobile applications for security organizations.

But what features do these instant messaging services have that can be of use to a control center?

From our point of view, the possibility of connecting to a REST or SOAP interface is top of the list as this enables the command and control system to transfer and control data. As well as platform independence, be it Android, iOS, web browser or desktop, it must be possible to integrate and adapt the messenger client to the user interface of the command and control system. It goes without saying that all data in the data transfer process data must be encrypted. The service should also allow for individual or group communication. The latter should further offer the option of creating incident-related groups and dissolving them again through the interface to the command and control system. Detecting the current GPS position as well as common access to online or offline content files is just as important as the ability to operate the service using its own redundant infrastructure. Connecting additional services that are partially based on artificial intelligence such as text translation, image or voice recognition can open up many more possibilities for improving convenience and efficiency.

Whether or not instant messaging services will develop into a kind of "one-for-all" application where emergency services and the control center can share every type of communication (language, data, status, etc.) remains to be seen. However, due to the rapid progress in 5G mobile radio standards, there is enormous potential for real-time communication.



Technologies of the Future in Control Centers?

„In my work as Product Manager for Innovations, and out of great personal interest, I am passionate about new technologies and closely follow their development. Today, I would like to present some of them to you as well as their possible effects and benefits for control centers."

5G

This new mobile radio standard will definitely change a lot of things and make many things possible that so far were impossible. Besides an up to 100-fold increase in bandwidth (up to 10 Gbit/s), latency in the range of single-digit milliseconds will provide "communication in real time", so to speak. Slicing (virtualization within the 5G network) allows virtual, isolated and application-specific areas and priorities to be created in a network. 5G could be used, for example, for home office control center workstations, real-time connection of IoT (Internet of

Christian REPASKI

things) – electronic devices that are connected to the Internet – or for streaming real-time videos of drone recordings, all without having to give much thought to the subject of network connectivity.

We will have to wait and see what opportunities the 5G road map will offer outside of laboratory conditions from 2020 onwards. What we do know is that we will see a sharp increase in the number of antenna installations due to the high frequency range and short reach of this technology.

ARTIFICIAL INTELLIGENCE (AI)

This basically deals with intelligence that has, until now, been reserved for humans. It is true that this technology has made huge strides in recent years (text and speech recognition, image analysis and much more). However, when compared to some movie scenes, it is still in its infancy. Nonetheless, AI will continue to make advances both in the personal sphere and in the control center environment where it will serve to make simple decisions or at least suggestions, that currently require years of experience. Notable examples are speech analysis during the acceptance of emergency calls and automatically generated dispatch proposals – without the comprehensive data supply which is currently still necessary.

Despite all this technological progress, when it comes to emotions, interpersonal relationships or "feeling and intuition", AI will not be able to replace humans for a long time yet – even if AI-based chatbots are already being used in psychotherapy.

BLOCKCHAIN

If you believe the many statements made at technology congresses, then blockchain will be changing our lives considerably in the coming years - and it will not just affect the financial world. Roughly speaking, we are looking at special databases that can manage transaction data without a central checking mechanism, without the need for mutual trust and with complete transparency. Effectively, we are looking at decentralized, distributed transactions and data which are processed without a central broker by means of their multiple copies and authentication using a hash value.

Admittedly at the moment, I do not yet see a practical use for this in control centers, but I do see this technology as a general technical "enabler", which could be put to use in the currently complex and maintenance-intensive data distribution mechanisms in decentralized control center systems. Blockchain technology could also open new opportunities in the field of data exchange over interfaces.

DevOps

DevOps is a continuous learning, change and improvement process within software development and system administration which enables us to react quickly and flexibly to change. However, flexibility and quality do not always go hand in hand. Therefore, it is important to ensure the quality of DevOps by an extensively automated quality assurance process.

If we look at many browser-based applications in our personal surroundings, DevOps has long been the de facto standard. This means that we as users do not even notice the frequency with which new versions are uploaded to analyze a problem more thoroughly at short notice or to just test the effects of a change on a certain user group. Under the keyword "Continuous Deployment", new versions are released virtually every minute and react immediately to findings from them.

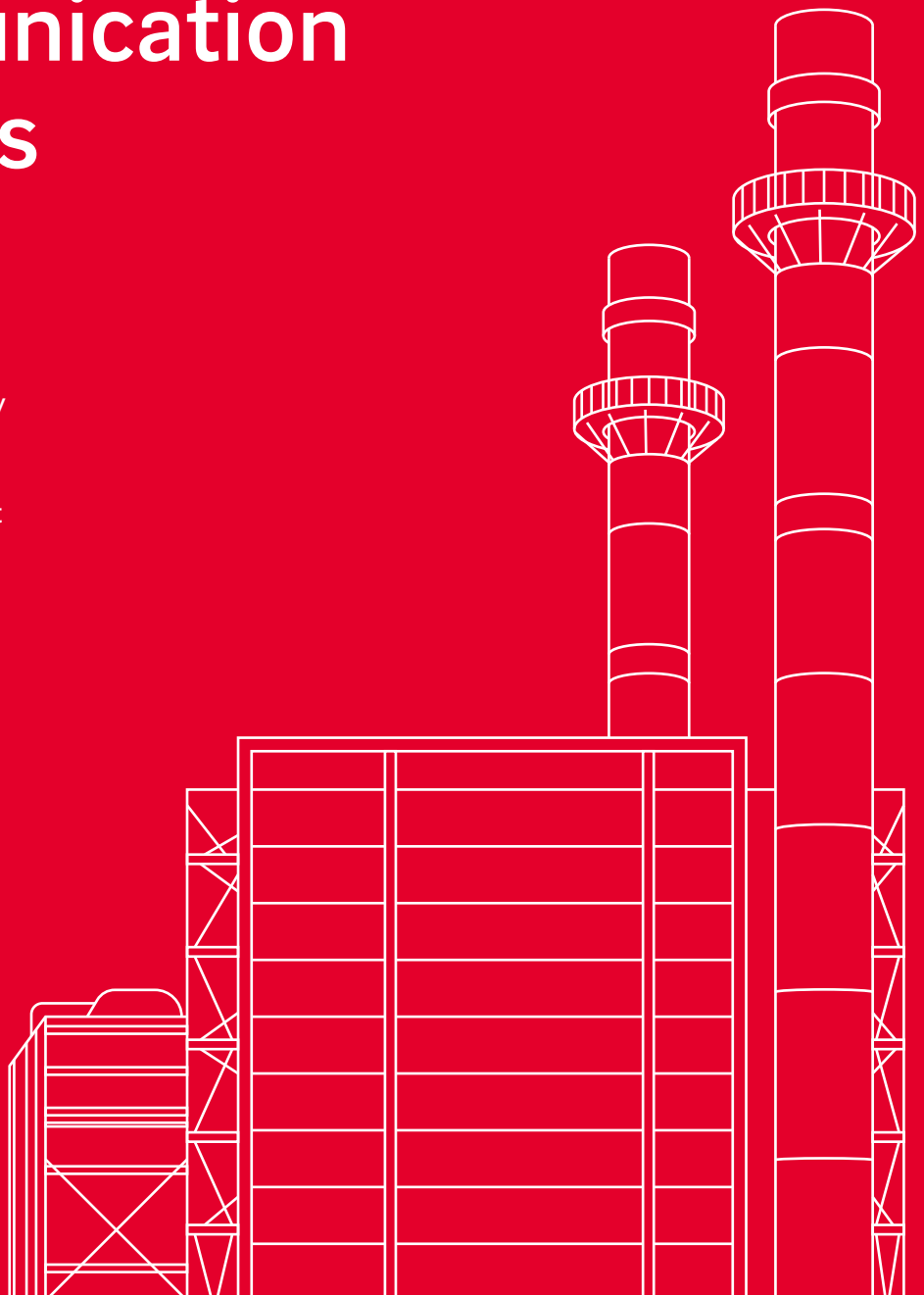
In control centers today, this is hard to imagine as there are often several upstream and time-intensive test and acceptance phases before a new version goes live.

This is why I do not really see DevOps in connection with traditional, decentralized desktop applications and solutions. However, with an eye on future cloud-based control center solutions, DevOps will certainly play a decisive role.

Whenever we think about using these technologies in control centers, we need to focus on the "added value" they could bring. Often, this is not always apparent at the first glance.

BASF opts for eurofunk Communication Systems

In the fall of 2017, the communication system emc^{2} VOIP was successfully installed and became operational at the BASF residue incineration plant control desk.



Benjamin IFEN

The control desk supports employees in managing the residue incineration process. Here, production residue (non-recyclable waste) is used to generate energy. The measuring station monitors and regulates the incinerators and associated subsystems. Communication between the measuring station and the employees working in residue incineration is managed by various subsystems. In addition, the measuring station handles any alarms. Communication and the alerting process are both controlled centrally by the eurofunk emc² VOIP communication system.

emc² VOIP combines previously disparate communication devices into one superordinate, highly available, IP-based communication system. It provides workstations with a uniform display and operation for a variety of sub-systems. The control panel on each workstation consists of a touchscreen and the appropriate audio equipment. Connection to existing communication and alarm systems, such as SIP-based telephony, telephone book import, public address system (ELA) and analogue radio, is achieved using the appropriate interfaces.

emc² VOIP is the perfect solution for all of these tasks. If provides a variety of interfaces, high availability, is customizable and scalable.

Measuring station for residue incineration at BASF Ludwigshafen

New Control Center Network for the Carinthian Alert and Warning Center

Stefan HUTTER

For more than 15 years, eurofunk has enjoyed a successful partnership with the Carinthian Alert and Warning Center (Landesalarm- und Warnzentrale Kärnten – LAWZ). This partnership was reinforced in May, 2018 by the signing of "LAWZ Carinthia Control Center Network 3.0", an ambitious project to unite control centers province-wide behind one technology.

"This network concept, consisting of three control centers and regional alarm and warning centers, represents a milestone in Carinthian emergency response."

LR Ing. Daniel FELLNER
speaker for the Provincial Fire Service and member of the Corinthian government

The decision to award the contract was based on the best bidder principle. After evaluating price, service quality and concept of execution, the LAWZ went with eurofunk as their partner of choice.

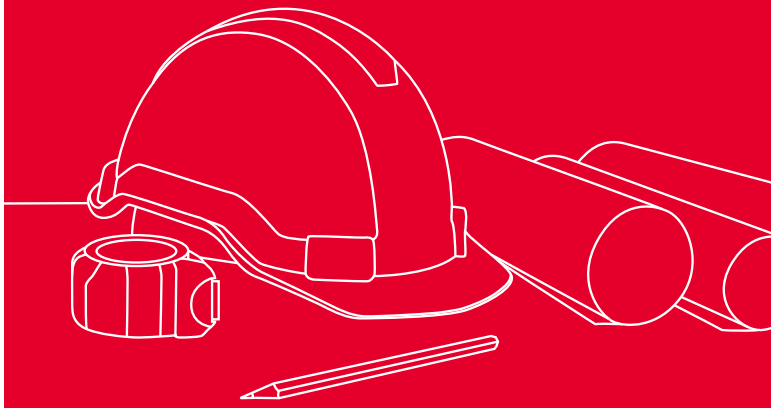
The concept began as a single control center location but was expanded to a comprehensive, province-wide network. This includes the LAWZ Carinthia locations in Klagenfurt, the operational center of the Klagenfurt Professional Fire Service and the operational center for Villach. Working from remote workstations, the regional alarm and warning centers were also integrated into the standardized technology.

Daniel Fellner, speaker for the Provincial Fire Service and member of the Carinthian government, understands the need for economy while still providing comprehensive alert coverage. "This network concept, consisting of three control centers and regional alarm and warning centers, represents a milestone in Carinthian emergency response".

„The technology provided by eurofunk guarantees that the control centers within the network can provide operational support for others in the network if and when it becomes necessary", says Provincial Fire Service Commander Rudolf Robin. If operations in one control center can no longer be maintained due to adverse circumstances such as environmental devastation, bomb threats or contamination, any of the other control centers can step in and take over. In the event of a high load scenario, workstations at a distant control center can support the affected control center and thus guarantee that emergency calls are accepted and emergency units are alerted adequately. Due to the technical and organizational implementation of the "free seating concept", the actual location of the control center or workstation is not relevant.

We here at eurofunk are proud to take part in this technologically innovative project for the Province of Carinthia and express our thanks for the longstanding loyalty and the trust placed in us!

emc² VOIP – Mannheim Professional Fire Service



This project was started in mid-2016 and had an extremely tight schedule due to building activities. The communication system was scheduled to go live in the new, modern building approximately ten months later.

Beforehand, in an extensive planning phase carried out jointly with the fire service, the setup of emc² VOIP, eurofunk's flexible IP-based communication system was worked out.

Following this, the system was installed on location at the future control center. Subsequently, intensive training and testing took place. In this phase, final adjustments were also made to the system in order to be fully prepared for commissioning. With a lot of support from all parties, the system successfully went live on May 3, 2017.

Brigitte FRITZENWALLNER

"The technology provided by eurofunk guarantees that control centers within the network can provide operational support for the others in the network if and when it becomes necessary."

LBD Ing. Rudolf ROBIN
commander and director
of the Provincial Fire Service

emc² VOIP Connects Höxter, Lippe and Paderborn

After Siemens AG announced that they would be closing down their control center technology business, the district control centers in Lippe, Höxter and Paderborn saw their chance to further develop synergy potentials.

Daniel GOLD

In a Europe-wide call for tender, eurofunk was awarded the contract to retrofit and link the existing communication technology and to connect to digital radio.

Work began in the third quarter of 2016. In the fall of 2017, Paderborn was the first control center to go live. Shortly before Easter 2018, the last two control centers also became operational.

In keeping with the saying "All for one and one for all", the multiphase pioneer project in North Rhine-Westphalia started immediately after the contract was awarded. After an intensive initial planning phase, including approval, the first hardware parts orders were triggered after only twenty weeks. The components were swiftly assembled and configured at eurofunk headquarters in St. Johann im Pongau. After internal quality assurance approval, factory acceptance was carried out at eurofunk headquarters by the technical planning office and the project participants from the 3 districts.

One important point worth mentioning in this project is the migration, which had to be carried out in parallel to the live running of the existing system in the control centers. In September 2017, Paderborn went live as the first control center after extensive and intensive on-site conversion work.

With the go-live in March 2018 of Höxter, the third and final control center, the estimated 805,000 citizens of the three districts can now rely on the best and fastest possible cross-district help. For the three districts, this efficient harmonization of cross-location connectivity also means that new work processes need to be adopted and continuously improved.

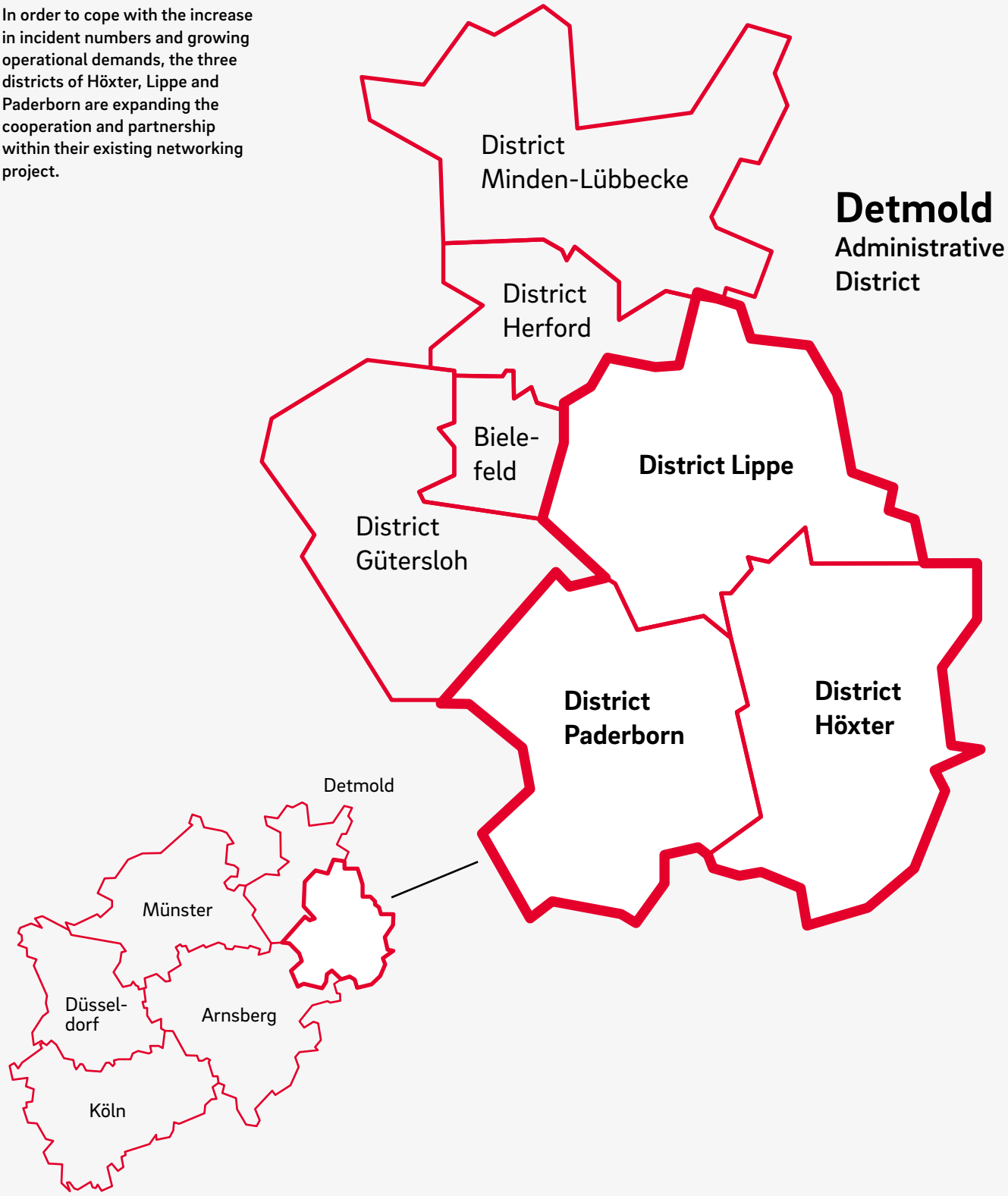
However, despite the linking of emergency calls and the intercommunal cooperation between the three districts, the project was far from completed. An additional contract order was received for retrofitting the on-call medical insurance service in the Lippe control center. Following this, the fire and rescue control center in the district of Lippe went live on July 1, 2018.

An important issue currently is the linking of the command and control systems in the three district control centers. Customer preparations for the next Europe-wide call for tender are already in full swing.

The eurofunk service team, mindful of their responsibility for the satisfaction of our customers, will continue working in close, productive and partnership-based cooperation.

HÖXTER, LIPPE AND PADERBORN: THE THREE DISTRICTS

In order to cope with the increase in incident numbers and growing operational demands, the three districts of Höxter, Lippe and Paderborn are expanding the cooperation and partnership within their existing networking project.



Managing Duty Rosters with ELDIS Management Suite

The most powerful member of the ELDIS Management Suite (EMS) module family is the duty roster. It completes the eurofunk product portfolio in providing administration and management tasks for comprehensive attendance planning, role assignment, employee management and accounting.

Like the other EMS modules, the duty roster is a web application, based on current web technologies. Key features include a responsive design and touch optimization. The duty roster can be used on desktop PCs as well as mobile devices such as tablet PCs and smart phones, regardless of screen resolution. The duty roster module is already being used by the professional fire services of Graz and the City of Salzburg, the fire department at Munich airport and the Site Control Center at BASF Schwarzheide, among others.

ATTENDANCE PLANNING

Attendance planning aims to ensure that a sufficient number of appropriately qualified personnel is available every single day. An important criterion for efficient personnel deployment planning is support in tactical and strategic planning, whilst taking into consideration general organizational conditions and compliance with statutory working time regulations.

Duties are planned in the EMS duty roster using multiple choice, double click or drag & drop directly into a display chart. The ability to configure live key data in a flexible way using vivid colors to depict shift days and employees means that a wide range of parameters can already be monitored during the planning process. At the same time, with the help of a predefined ruleset, adherence to labor laws can be monitored or, alternatively, a proposal for possible service entries can be displayed. Freely configurable sorting criteria, weekday and public holiday core attendance requirements and the display of employee rankings, for example, allows a user to take into account further requirements of role assignment while planning attendance.

Teams can plan and enter their vacation time and free periods interactively and paper-free, directly in the display chart. As with all other duty roster functions, data protection has the highest priority and is ensured by means of extensive viewing options.

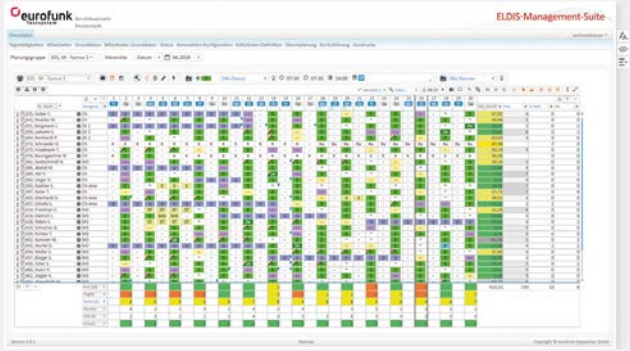


Image 1: Attendance planning

ROLE ASSIGNMENT

Besides attendance planning, another essential part of the duty roster module is role assignment. This is where the personnel on duty is assigned to the roles that need to be filled. Special attention is paid to the requirements for core attendance and the qualifications required for the respective roles. The role assignment chart displays a large number of additional criteria for both roles and personnel, or optionally only suitable personnel can be automatically proposed for the respective role.

Current role assignments and other selected duty roster information can be displayed on the "EMS Infoscreen". The Infoscreen can be displayed in a browser as a webpage and shown on several screens (e.g. throughout the station) without elaborate client installation. Acoustic notifications and text-to-speech output are also available.

Andreas SCHNEEBAUER

EMPLOYEE MANAGEMENT

The employee management functions can be used to collect a wide range of information on employees that is relevant for the management company's operations. In addition, extensive evidence management can be mapped – for example, for a smooth and timely and renewal of time-limited qualifications.

ACCOUNT MANAGEMENT

During attendance planning and role assignment, a variety of relevant key data is created for the each employee. This can range from the simple number of specific duties completed to the management of complex work time, overtime or supplement accounts. The relevant accounts as well as entitlement definitions and booking criteria can be configured flexibly. The ability to display live key data means that employee accounts can be monitored during attendance planning.

PRINTOUTS

With the help of extensively configurable printouts for all areas of the duty roster, it is possible to format the output of planning or account balances in a flexible way. Printouts of the duty roster can also be created and filed automatically at preset intervals or at specified times.

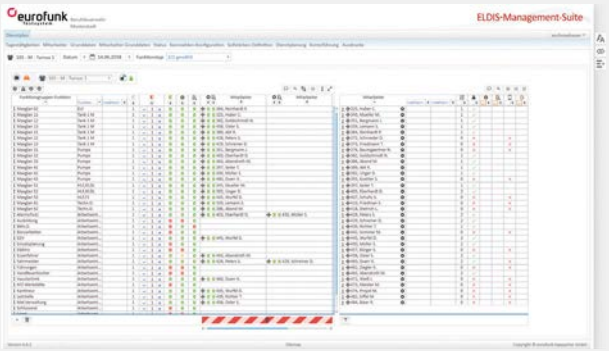


Image 2: Role assignment

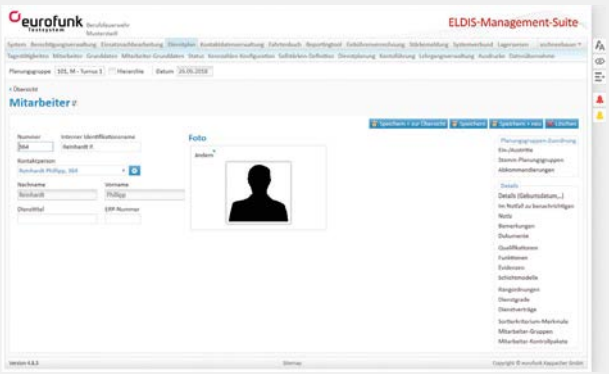


Image 3: Employee management

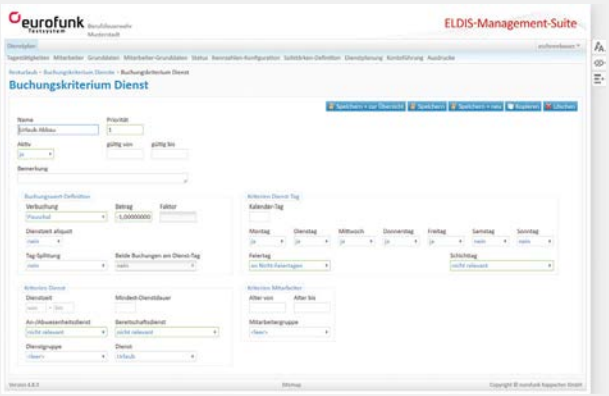


Image 4: Account management

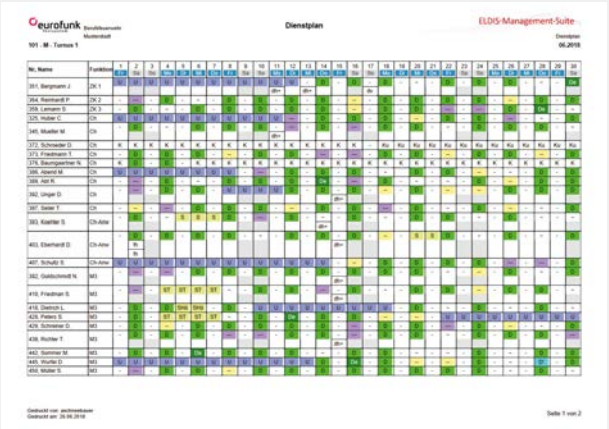


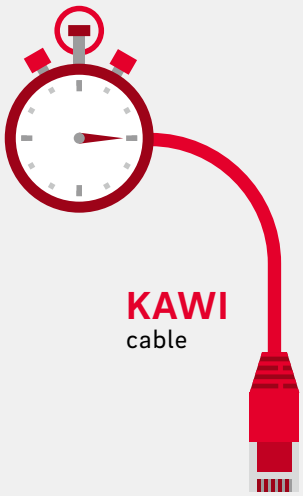
Image 5: Printouts

Dictionary

ENGLISH – SALZBURG-ISH

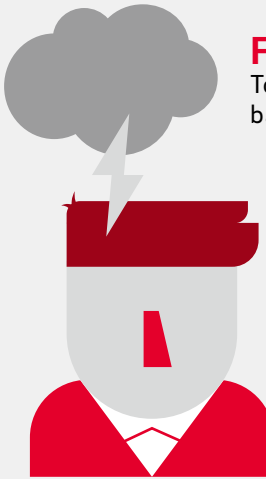
We have put together this Salzburg-ish dictionary so that you are in a better position to understand our experts the next time you visit St. Johann!

GACH
fast / now / quick



KAWI
cable

FEINZIG
To be in a bad mood

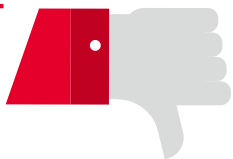


SCHIAGA
almost

HINIG
kaput, broken

HAFAL
Mug, large cup

GLUMPAT
A thing which is of poor quality



BUGGLN / HACKLN
To work hard

SEAS, WOS SOG A?
Hi, how are you?

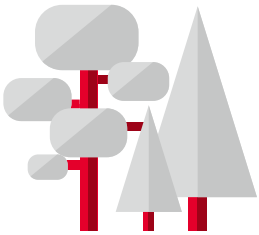
DUA GLEI
Just do it

IS GRECHT
alright, ok

SCHATZ MA MOI
Let's talk about it

MURX
A "quick and dirty" solution

EPPS FEIGLT / FUXT SI
It doesn't work the way you want it to



AUSSI
out

EINI
in, into

AUFI
up

OWI
down

UMI
over, across

ZUWI
nearer

Digital Radio for the Upper Austrian Red Cross

As the expansion of the Austria-wide TETRA digital radio network continues to progress, many new opportunities are opening up for emergency organizations. Area coverage is now so far advanced that the analog radio infrastructure can be replaced.

This is why the Upper Austrian Red Cross, our customer and partner of many years, has decided to work with eurofunk to retrofit their existing communication technology systems, the related vehicle infrastructure as well as the software. The goal is to use TETRA digital radio in all these aspects.

Besides using digital radio for speech communication, status updates and sending SDS data, it is also possible to use the "call-out" feature for alerts. In contrast to emergency organizations belonging to BOS (the government and public safety authority in Germany), the call-out alerts in Austria are not sent to pagers but straight to the handheld radios of the first responders. A notable added value feature is the automatic acknowledgement for each alerted handheld radio which is sent to the location that triggered the alert. This was not possible with pagers as they were alerted using analog radio. The addition of a receipt acknowledgement sent when a call-out is confirmed provides the operator with valuable information on the availability of the responders who were alerted.

In order to provide the desired digital radio functions, the latest IDDS UCiP technology is being integrated into the networked control center infrastructure at the Upper Austrian Red Cross. Likewise, the data terminal software and radio modem is also being brought up to date.

To make sure that the new functionality, once fully integrated into the daily work processes, is used to best advantage, the eurofunk command and control solution ELDIS 3 is also being upgraded. We are creating the option of giving preference to the TETRA network for certain alert processes according to the

Martin JÖRG

priority of the incident. An alternative option is to pass the alert message to all devices in a tactical unit in accordance with pre-defined requirements. Additionally, in the course of this expansion, a quick, simple and centrally-controlled switchover of the radio devices to the required digital radio talk group will also be facilitated.

The work associated with this digital radio expansion is already in full swing. We are delighted that we will soon be able to complete this exciting project with our long-standing partner.

TETRA Call-Out

The **alert process in TETRA** is known as TETRA call-out. These are special text messages which are given priority sending in the TETRA network. In addition to direct addressing (ISSI), it is also possible to address TETRA call-outs to talk groups (GSSI) and to specify a sub-address to be triggered within the group (GSSI +Sub).

The alerted devices (pagers or radios) behave differently according to the **severity level** applied – there are 16 possible levels. Using severity levels, it is possible to not only change the **alarm tone** but also to **unmute a handset** or to **request a response.**

Once an alert has been triggered using TETRA call-out, it is also possible to acknowledge the alert or to respond to it with a pre-defined text (e.g. "Involved in another incident").

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Innovation and the knowledge to create safety is our biggest motivator.

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creating safety by technology

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