eurofunk
news

INNOVATION NEEDS SPACE AND FOCUS

This and many other topics
await you in this issue
of the eurofunk NEWS

eOCS
The power
of subtle design

eSA
The sleep-friendly
station alarm

EVONIK
New and improved
control center

eurofunk strengthens its executive leadership

Dear Readers,

As eurofunk's growth continues, our management team is dedicated to enhancing our processes to more effectively tackle the challenges within the BOS environment and industry. In 2008, the reins of leadership were passed from our company's founder, Hans R. Kappacher, to Christian Kappacher as CEO and Dr. Christian Kappacher as Managing Director. Since this transition, our workforce has grown steadily, evolving from 260 employees to over 600 through natural and sustainable development.

To facilitate our company's expansion efforts, we are taking proactive steps. Starting September 1, 2023, Jürgen Kappacher, the son of the company's founder, Hans R. Kappacher, will assume a role on our Management Board. Jürgen Kappacher will be appointed as the Chief Financial Officer (CFO) on the Executive Board, where he will be responsible for overseeing our Shared Services division. This division encompasses various crucial functions, including Human Resources & Talent Center, Finance & Procurement, Business Analysis, Facility Management, IT Core & IT Application Services, as well as Digital Design & Consulting.

In his new capacity as CFO, Jürgen Kappacher will also assume responsibility for a wider range of functions, encompassing Quality and Environmental Management, Knowledge Management, Documentation & Training, and Information Security.

Christian Kappacher will concentrate on product development, which has experienced significant growth in recent years, while continuing to lead as CEO. Dr. Christian Kappacher, as the COO, will continue to concentrate his efforts on overseeing key business functions, including Sales, Solutions, Customer Delivery Management, and Service & Support.

We are delighted to have Jürgen Kappacher join our management trio, enhancing our collective capabilities and strengthening our readiness for the future.

We hope you enjoy reading our NEWS issue, which covers a wide range of exciting and current topics.

Christian KAPPACHER CEO   **Dr. Christian KAPPACHER COO**   **Jürgen KAPPACHER CFO**

Contents

Innovation Needs Space – eurofunk's New Offices

Christina DAVID
HR Business Partner

At eurofunk, we believe that innovation flourishes when given the right environment. Our recent office expansion is designed to enhance our capacity to generate groundbreaking ideas and drive technological progress. We've taken great care to create an exceptional environment where both our current team members and talented newcomers are free to express their creativity. This space is dedicated to creating cutting-edge control center solutions and solidifying our position as the industry leader.

INTRODUCING THE INNOVATION OFFICE BERLIN

Our „Cooperative Control Center Berlin" project is a major milestone in eurofunk's history. To be closer to our customers, we've secured office space in Berlin. This move not only strengthens our partnerships with local authorities but also allows us to tap into the pool of local talent.

Our Berlin office is now situated in **Techspace Kreuzberg**, a modern office that's conducive to innovation. It accommodates a team of twelve, spanning Software Development, Customer Consulting, and Field Service. Beyond work, our sun terrace, table tennis, and team events promote collaboration and creativity.

DEVELOPMENT OFFICES LINZ URFAHR & KLAGENFURT

In 2023, eurofunk established two new development offices in Linz-Urfahr and Klagenfurt. In June 2023, our Linz-Urfahr location became the workplace for up to 20 dedicated professionals, while in Klagenfurt at the Lakeside Science & Technology Park, our previously established office grew to accommodate a team of up to 35 members.

Our offices enjoy excellent connectivity to dependable public transportation networks, enabling effortless teamwork and easy accessibility for our clients. This connectivity is designed to foster and sustain long-term partnerships and the exchange of knowledge with prestigious academic institutions such as the **Hagenberg University of Applied Sciences, the Johannes Kepler University Linz, the University of Klagenfurt**, and various technical colleges. In addition to this, we are dedicated to fostering emerging talent through our internship initiatives, providing young individuals with valuable insights into eurofunk's world and control center technology.

Come be a part of our dynamic environment, where innovation thrives and flourishes. Together, we are actively shaping the future of control center technology. #eurofunkInnovates

Unlocking Operational Excellence: The Power of Subtle Design in eOCS

Have you ever wondered why eurofunk's revolutionary operations control system, eOCS, embraces a more muted color palette compared to its competitors?

WHY THE MINIMALIST COLOR SCHEME?

eurofunk aims to create a system that helps users work comfortably and without fatigue. We want to help them perform their tasks effectively, even during long shifts that span day and night.

HOW DOES EUROFUNK ACHIEVE THIS?

In eOCS, we adhere to a fundamental eurofunk principle: uncompromising simplification. This philosophy is clearly evident in our limited utilization of color, which is guided by the users' need to focus on the essentials. By opting for neutral shades for large areas, eOCS intentionally reduces visual distractions. The outcome? Improved alertness to changes or errors, thus minimizing the risk of overlooking critical information.

ERGONOMICS IS THE KEY

Looking at it from an ergonomic perspective, opting for grey backgrounds is a smart choice. Grey, positioned between the sharp contrasts of white and black, alleviates eye fatigue and discomfort. To diminish eye strain and enhance clarity, we recommend the use of no more than six colors at a time. In the eOCS system, colors are employed in a deliberate and selective manner. This strategic approach prevents sensory overload and reduces the possibility of missing vital information.
eurofunk incorporates these ergonomic principles by offering a Dark Mode feature, ensuring a pleasant user experience in low-light settings.
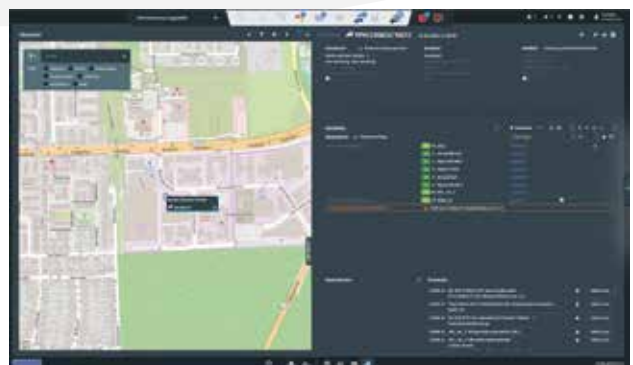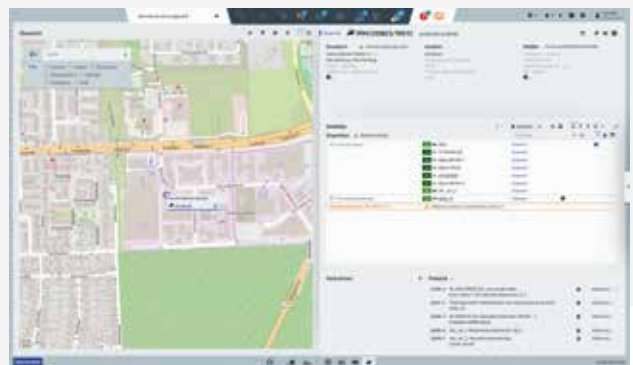
Incident handling in day or night mode

Rainer SMEKAL
User Experience Expert

FOCUS ON SIGNALING

Nevertheless, colors are crucial for indicating important events and changes in eOCS. We follow DIN EN ISO 9241 recommendations to use signal colors to draw users' attention to notifications, error messages, and success indicators.

An excessively vibrant interface can distract from more important color-coded elements, making it harder to quickly spot new or modified information. Therefore, eOCS uses colors judiciously, maintaining simplicity and reducing unnecessary distractions.

Intermittent color highlights for active elements and mouse-overs help users navigate without visual overload.

Which gives us another answer to our original question about the minimalist color scheme: less is more. This makes sure that the system gives you the right information at the right time because – as we all know - every second counts.

THE OPINION OF USERS

Our usability tests strongly endorse eurofunk's approach. When put through usability and concept tests in real-world control center scenarios, users consistently praise our design for its clarity, organization, and aesthetic appeal. This overwhelming vote of confidence motivates eurofunk to remain dedicated to its minimalist design philosophy and to continuously enhance the user experience.
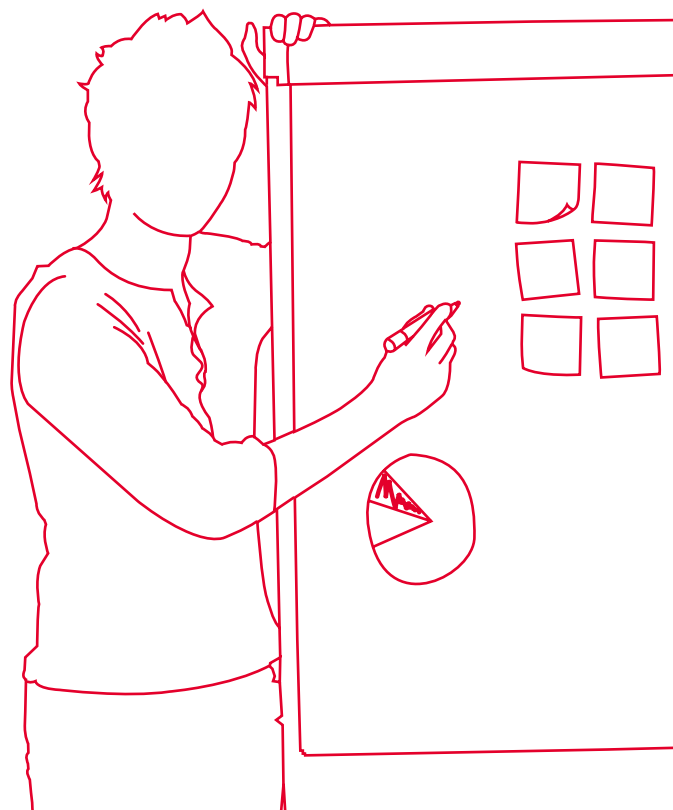
Reasons for Embracing Minimalist Design:

Effortless Work:
- Absence of glaring backgrounds
- Limited use of vivid colors
- Day/night mode for personalized comfort

Error Prevention:
- Focus on the essentials
- Minimized distractions
- Strategic use of colors as signal indicators

eMS: Your All-in-One Solution for Streamlined Incident Management

Welcome to the eurofunk-Management-Suite, or eMS, a cutting-edge web-based software solution that simplifies every aspect of incident preparation and follow-up. eMS integrates seamlessly with our recognized software family - ELDIS 3, eOCS, and eBI - to provide a comprehensive incident management experience.

At its core, eMS is your go-to software for mission preparation and post-mission tasks. It handles everything from **duty scheduling** to **incident resource management** and **mission reporting, charging**, and **travel log maintenance**. Through the automation of these administrative and managerial procedures, eMS enhances efficiency and effective time utilization, thereby supporting and augmenting your emergency call and mission control efforts.

eMS, now in its fifth generation, continues eurofunk's 25-year history of supporting emergency response organizations of all sizes with pre- and post-deployment preparations.

Designed as a **web application**, eMS is accessible on both stationary devices like desktop PCs and notebooks, as well as mobile devices such as tablets and smartphones. It boasts a dynamic layout, responsive design, and touchscreen optimization, ensuring a seamless experience across devices. Plus, we stay up-to-date with the latest web standards, guaranteeing compatibility across various operating systems and web browsers.

DUTY ROSTER

When it comes to mission preparation, the **eMS Duty Roster** module offers helpful features for **personnel deployment plan-**

Duty and absence planinng

Andreas SCHNEEBAUER
Product Manager &
System Architect

ning. Strategic specifications and organizational frameworks can be mapped out effortlessly. Our innovative planning groups allow you to organize employees in a customizable structure and hierarchy, simplifying oversight for large organizations and enabling flexible duty planner assignments. eMS even accommodates separate organizations to allow for data privacy.

Our **employee management functions** capture a wide range of master data and employee information vital to duty operations. **Attendance planning** ensures that the right personnel is scheduled daily, with real-time updates and flexible customization. **Function planning** helps allocate staff to specific functions like vehicles and work services, aided by an automatic suggestion feature. These planning processes are visual and interactive and adaptable to your unique needs and scenarios.

Our system offers an automated suggestion feature, initiated with a single click, to facilitate rapid generation of staffing recommendations based on individual criteria for function planning. We provide a user-centric approach to attendance and function planning through graphically interactive pages. These pages can be extensively customized by each user, accommodating not only personal preferences and device-specific requirements but also varying planning scenarios. Comprehensive account management with performance metrics offers a clear overview of attendance and function planning, enabling the generation of precise account balances for both planning groups and employees. This data can also serve as a foundation for exporting duty roster data to external systems, such as SAP. For fire safety services, our integrated fire safety watch function supports planners in handling complex planning tasks. Flexible printouts, available in the form of generated PDF files, facilitate the targeted extraction of data from all functional areas of the eMS duty roster, enhancing the efficiency of your operations.

eMS offers comprehensive account management with key figures, providing clear attendance and function planning insights. You can even export duty roster data to external systems like SAP. For fire safety services, our integrated fire safety watch function

streamlines challenging planning tasks. eMS also provides versatile PDF-format printout options, streamlining data output.

STREAMLINE YOUR WORKFLOW WITH CENTRALIZED USER MANAGEMENT

eMS utilizes a centralized **user and authorization management** system, which allows users with responsibilities across multiple modules to access their tasks with a single login. Master data and transactional data can be shared and used in cooperation with different eMS modules, minimizing errors and eliminating the need for redundant data entry.

STAY INFORMED WITH eMS INFOSCREEN

With the **eMS Infoscreen**, you can display critical duty roster information, such as employee attendance and vehicle occupancy, at various locations. Customize the visual design to suit your specific needs, including screen size, viewing distance, and lighting conditions. You can even incorporate sound playback and text-to-speech output for important notifications.

UNLOCK THE POWER OF DATA WITH eBI

To gain deeper insights, use our **business intelligence tool, eBI**, to analyze and display data from all eMS modules, either in isolation or in combination with data from ELDIS 3, eOCS, or other eMS modules. Create live dashboards to access real-time data and key figures, ensuring you always have the information you need.

Choose eMS for a smoother, more efficient deployment management experience. With eurofunk's expertise and cutting-edge technology, you're in control every step of the way.

For more details on eBI, please refer to the following pages. →

eBI-COM: Bundle for Reporting & Dashboards
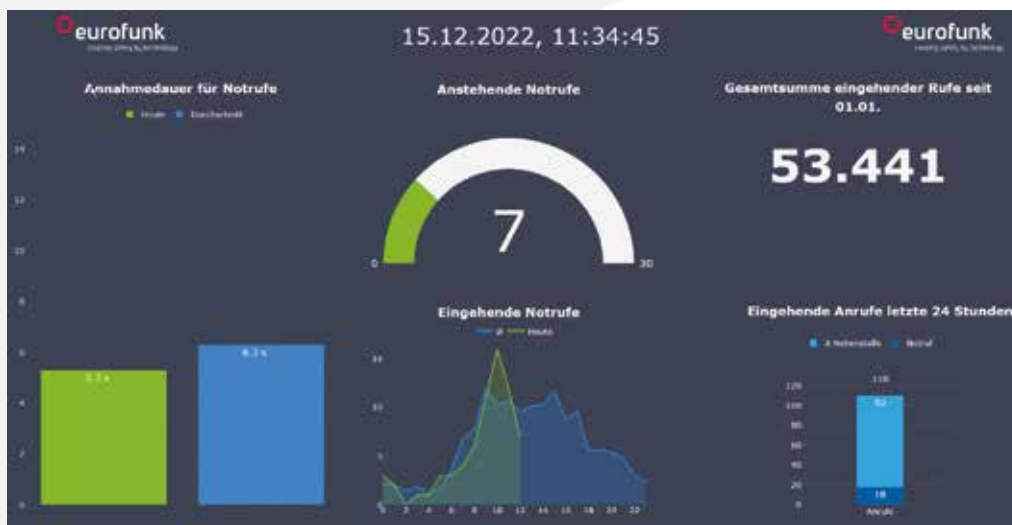
Fig. 1: eBI-COM Dashboard
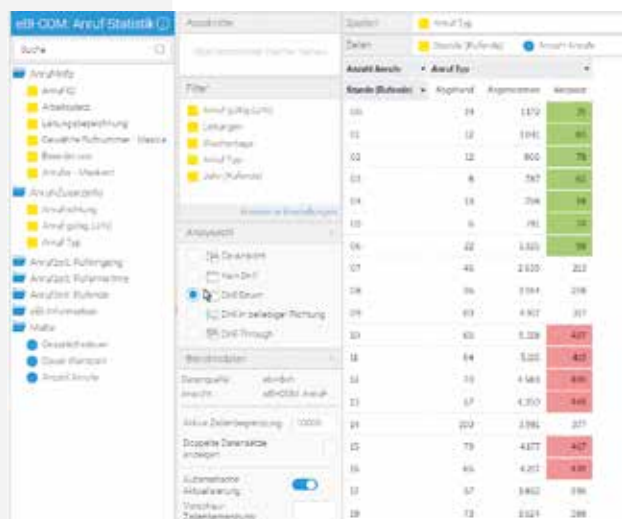
Fig. 2: Data analysis with conditional formatting

Introducing eBI-COM: Your Reporting and Dashboard Solution

eBI-COM is a specialized tool within the eurofunk Business Intelligence (eBI) suite, designed for data analysis, visualization, and reporting. It goes beyond just statical reports and includes dynamic dashboards (see Fig. 1) to help you make sense of your data from eurofunk communication solutions (Fig. 2).

To make eBI-COM accessible, we've included standardized, ready-to-use reports, which you might recognize from the IDDS statistics module. These reports can be used as is, or you have the option to customize them to meet your specific requirements using eBI-COM.

Igor SACHEVSKI
Product Manager
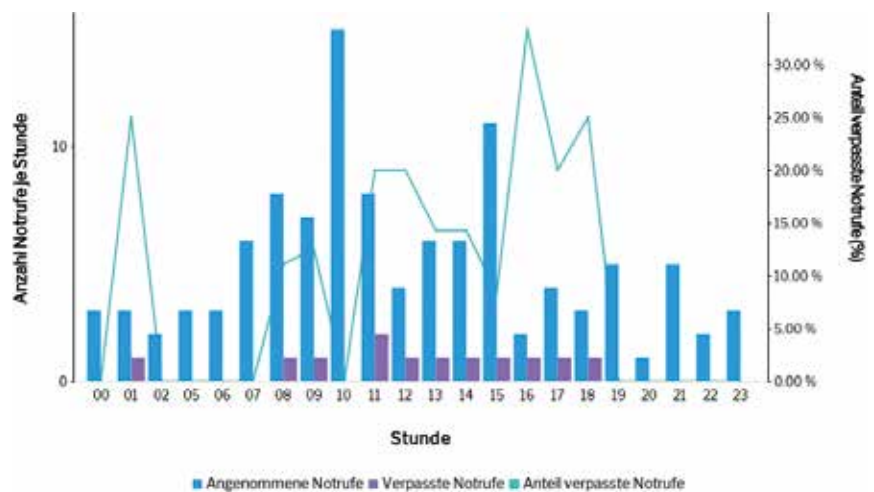
Fig. 3: eBI-COM combination chart

The visualization options are endless and diverse. For instance, Figure 3 demonstrates a combination chart displaying accepted and missed emergency calls alongside the percentage of missed calls. Figure 4 presents a heatmap diagram showing the average waiting time of emergency calls in seconds, along with the number of emergency calls, categorized by emergency call line and month.

We've also developed a dedicated COM dashboard within eBI-COM that provides real-time data from your communication system. This dashboard is tailored for customers who want to visualize data from eurofunk communication solutions. Mission control system customers can even create customized dashboards based on a unified data source.

With eBI-COM and eBI-Dashboard, you'll always have an up-to-date view of your operational status. Stay informed with eurofunk's Business Intelligence tools.

Fig. 4: eBI-COM Heatmap

IDDS UCiP:
Locate Emergency Callers Safely

Unlock the Power of Location Tracking and Data Retrieval with IDDS UCiP

Key Data Available via the RTR Interface:

- Location coordinates

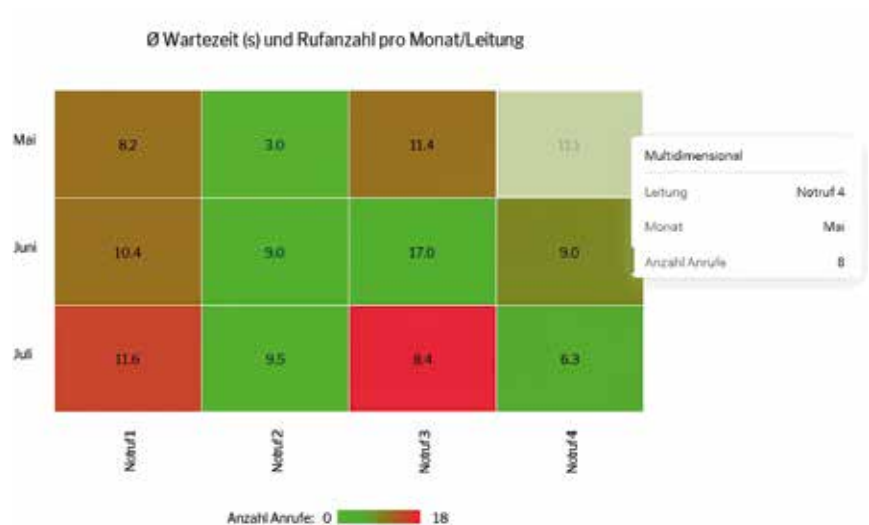- Address details (city, street, house number ...)

- Subscriber names (first name, last name, company name ...)

> "Incorporating both AML and RTR position data into the system significantly enhances the speed and precision of deployment location determination. Quick and accurate location information allows for targeted and early alerts to emergency responders!"

DI Wolfgang NIKOLAUS
BK Project Manager
Viennese Professional Fire Department

Every day, reports and news broadcasts provide information about current operations. You may have already come across the following message: "The missing person was located in the exposed mountain region with the help of a smartphone."

HOW DOES OUR DIGITAL POSITIONING WORK?

Our system leverages mobile operator data, utilizing the geographic positions of cellular base stations (BTS) and their radio coverage areas. This information is invaluable for law enforcement and, more importantly, in the case of critical rescue missions. Austrian control centers have legal access to this sensitive data, which is automatically retrieved for emergency calls from both mobile and landline networks. We call this the RTR (Rundfunk und Telekom Regulierungs-GmbH) interface. It is compliant with the Telecommunications Act and will be available for customers beginning with system release 1.28.

The RTR interface not only offers location data but also provides valuable additional information, including the subscriber's name and address. With the IDDS UCiP, we seamlessly integrate the RTR interface into our system, ensuring that this information is readily available.

Johann DOPPLER
Product Manager
Communications

## IDDS UCiP: WHERE LOCATION AND MASTER DATA MEET

When an **emergency call** is made, our IDDS UCiP system **instantly queries location and master data**, delivering critical information within seconds. Users can access this data via a map or text display, ensuring they have the information they need when it matters most. For **landline** numbers, the subscriber's address is provided instead of a terminal position.

In addition to the automatic query feature, there is also an option for manual queries. Users can request location and master data associated with a phone number at any time, independently of phone calls. However, this manual query option is reserved for emergency situations only, with the user making the determination of what constitutes an emergency. The IDDS UCiP system provides support by offering relevant information and evaluation tools to assist in the decision making.

ENHANCING PRECISION WITH AML AND RTR

The data obtained from the location and master data query complements AML (Advanced Mobile Location) perfectly. While AML provides highly accurate positioning for mobile network emergency calls, the RTR interface offers valuable additional details such as addresses and names. Importantly, the RTR interface extends its support to calls from landline networks, making it an indispensable tool for emergency services.
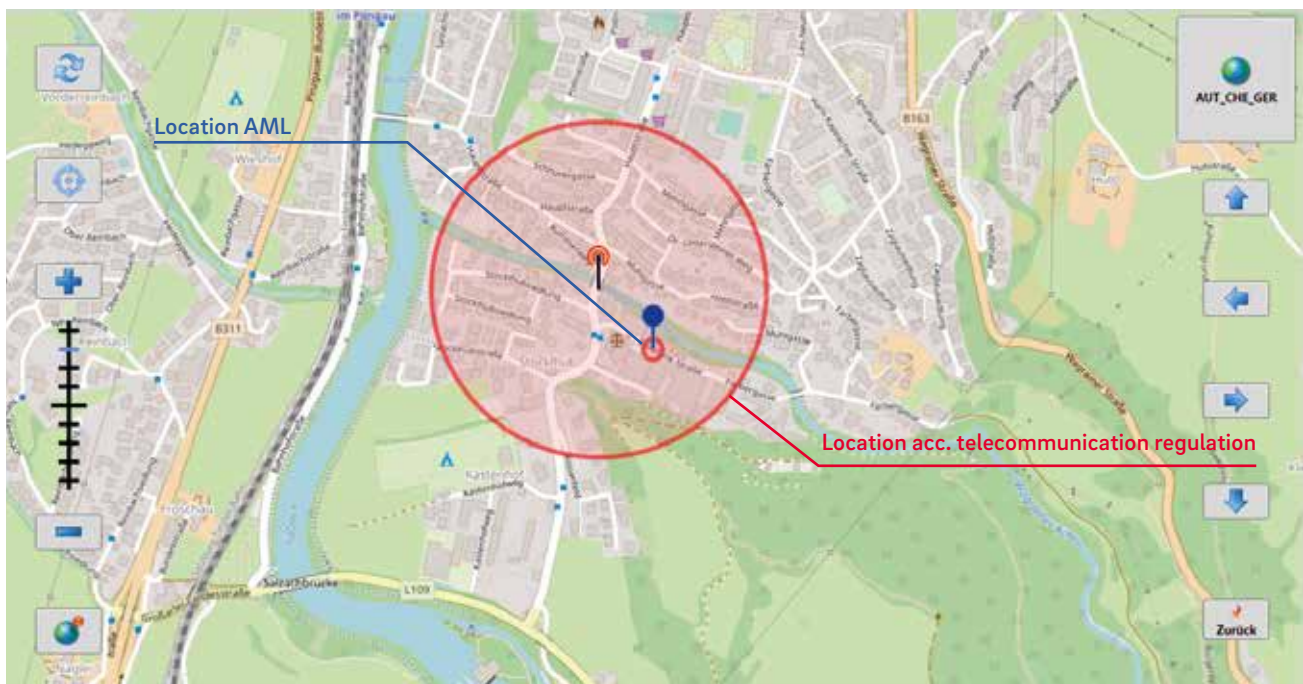
Overlay of the subscriber location determined by AML (blue PIN in the center compared to small area of uncertainty) with RTR location (red PIN with significantly larger area of uncertainty) in the IDDS UCiP map view.

© eurofunk; Map: OpenStreetMap

Can Coronavirus Infect Your Tech?

Markus SCHAFFLINGER
Head of Division Solutions

Probably not, but it did have an impact on IT within control center projects.

The world was taken off guard by the coronavirus and continues to grapple with uncertainty and instability. The pandemic hasn't just affected individuals and society; it has also left its mark on the global economy, particularly in terms of disrupting worldwide supply chains. Many nations closed their borders, scaled back production, and brought entire industrial processes to a standstill.

This crisis has underscored just how much of our prosperity and quality of life relies on interconnected global supply chains. Border closures and restrictions have placed numerous sectors of the economy under duress and presented **formidable challenges for global logistics and transportation networks.**

Another factor of influence is the ongoing **conflict between Taiwan and China**, demonstrating how swiftly political decisions can reverberate through the global economy. Companies with operations in Taiwan are directly impacted by this conflict, leading to further delays, supply shortages, and accompanying price fluctuations.

eurofunk is also heavily reliant on the supply of electronic components and IT equipment. Given the altered global market landscape, eurofunk was compelled to take immediate corrective measures to minimize project delays. Teams from Solutions and Development managed to craft **alternative technical solutions**, while Purchasing **diversified its supplier** base to secure additional sources for materials.

Furthermore, **warehouse capacity was expanded** to maintain higher minimum stock levels, better insulating against delivery delays.

By employing this approach, eurofunk ultimately managed to avert project delays or effectively manage them, thereby securing its ongoing position as a reliable partner in control center technology.

ELDIS 3 for Industry & Airport: Revolutionizing Control Center Digitalization with Innovative Technologies

Florian WENZEL
Sales Manager

ELDIS 3: The high-performance control center system that gets better with each passing year!

ELDIS 3 is a highly dependable control center system that has established a strong presence not only within the public sector but also among industrial and airport clients. Continuous enhancements ensure that customers can efficiently perform their tasks both now and in the foreseeable future.

One crucial element of ELDIS 3's appeal is its compatibility with current technologies, facilitating the adoption of innovations while maintaining compliance with security and data protection standards. The system is designed to support the **latest operating systems**, Oracle database systems, and Microsoft .NET technology, ensuring long-term support. This foundation enables the development of platform-independent interfaces using contemporary container technologies.

Beyond technical enhancements, ELDIS 3 places a focus on improving various aspects to benefit users. These improvements encompass optimizations in detector management and the **incorporation of new interfaces**, such as IFAM or WinGuard from Advancis.

In recognition of the growing importance of field operations, ELDIS 3 seamlessly integrates with **resQnect MOBILE** and **resQnect DRIVE**. This integration streamlines workflows and enhances data exchange efficiency, ultimately improving user experiences.

For scenarios where a permanent online connection to an RDS server cannot be guaranteed or RDS solutions cannot be implemented due to terminal device characteristics (a small display for example), there is the option of transmitting deployment data to eurofunk Mobile Resource Services (eMRS). **eurofunk Mobile Resource Services (eMRS)** provides an open interface for transmitting deployment data to the eurofunk app resQnect or other third-party applications. This functionality allows for the display of deployment data, linked documents, and the capture of status messages and feedback.

If you are interested in the implementation of app functionalities that may be relevant to your operations, please do not hesitate to contact eurofunk!

New Evonik Operations Center

Volker SCHULZE NEUHOFF
International Sales Manager

Evonik commissions eurofunk with the renewal and modernization of its control center in Wesseling.

Nestled between the cities of Bonn and Cologne, Wesseling has been a hub for chemical production since the late 19th century. Today, it boasts the cutting-edge Evonik Verbund site, a dynamic chemical park housing four partner companies and employing over 1,400 skilled individuals. The products manufactured here are renowned for their premium quality and find application in diverse sectors, including healthcare and nutrition, as well as every-day essentials like personal care items, tires, rubber goods, paper, paints, coatings, and animal feed.

The plant's specialized fire department uses its expertise to maintain safety during operational emergencies. The team works from a state-of-the-art command center, where they manage various documentation and alert systems that will soon be integrated into the advanced operations control computer system created by eurofunk.

The upgraded command and control center is to include four workstations, one of which will be mobile and housed in an emergency vehicle. eurofunk's product line-up for this project includes ELDIS Industry Core as the incident management system, IDDS UCiP as the communication system, along with IT components, media technology, and eDESKc control center desks. The hazard management system WinGuard will also be upgraded and integrated with ELDIS Industry Core.

At eurofunk, we're excited to work with Evonik in the industrial sector and look forward to a fruitful partnership.

Coming soon to Evonik: the communications system IDDS UCiP

Evonik's location in Wesselingen

©Photo: Evonik Industries AG

Georedundant Systems with eurofunk emc² VOIP

Peter KLIX
Sales Manager Pforzheim

Introducing the New Integrated Control Center for Heidelberg and the Rhine-Neckar District!

eurofunk is thrilled to introduce an innovative collaboration that is revolutionizing emergency response in Heidelberg. On April 4, 2023, the **ILS Heidelberg / Rhein-Neckar-Kreis** commenced its operations at the Heidelberg location, powered by our cutting-edge technology. This significant milestone signified the smooth shift of the emergency number 112 for fire and rescue services from Ladenburg to the state-of-the-art facility in Heidelberg. The highly anticipated inauguration of this advanced facility on Baumschulenweg in Heidelberg followed on April 26, 2023, generating immense excitement.

In Heidelberg, a team of highly skilled dispatchers, equipped with up to **twelve advanced workstations**, now utilize our technology to manage emergency calls from Heidelberg and the entire Rhine-Neckar district. With precision and efficiency, they orchestrate the rapid deployment of **the fire department, rescue services, and disaster control**. Further responsibilities encompass **patient transport services**, ensuring the well-being of the community in Heidelberg, the Rhine-Neckar district, and Mannheim.

Behind the scenes, the Ladenburg site is undergoing a remarkable transformation. Renovations and technical upgrades are in progress, all geared towards establishing a **dual-site control center**. This strategic move is designed to ensure uninterrupted availability for and coordination of emergency calls.

Our technology equips the control center with **28 innovative workstations** and 38 emergency call lines, ready to handle major emergencies with precision and efficiency. The control center is committed to safeguarding the well-being of over **700,000 citizens**, handling approximately **450,000 telephone calls** annually, coordinating 108,000 rescue service calls, responding to **4,500 fire department incidents**, and facilitating roughly **70,000 ambulance transports**. These impressive statistics make ILS Heidelberg / Rhein-Neckar-Kreis the second-largest control center in the region of Baden-Württemberg.

Partnering with eurofunk, the control center has harnessed **advanced communication technology**, including our flagship emc² VOIP and a suite of associated services. This encompasses **key management, network technology**, **IP emergency call connections, telephony, building services control, media technology, radio systems, and redundancy systems** – all meticulously configured to increase the center's capabilities.

The technical solution for both sites relies on the advanced and dependable emc² VOIP product line. The server-side software components were seamlessly incorporated into the **customer's existing server cluster** located in the data center. The system components' design took into account both cross-site networking and the independent operation of both sites, including the setup of **external communication pathways**. Moreover, the equipment is enhanced with eurofunk's widely-used **eDESKc control center desks**, which have been customized to meet the specific needs of a control center.

The eurofunk branch office in Pforzheim has been instrumental in overseeing the technical project management, facilita-

ting a seamless and cooperative effort to bring this transformative vision to realization. Together, we're making strides towards a safer, more connected future, powered by cutting-edge technology and a steadfast commitment to our community's safety.

Join us in celebrating this monumental leap in emergency response, made possible by eurofunk's innovation and unwavering dedication to advancing safety standards.

"The collaboration with eurofunk was consistently constructive and goal-oriented. They were adept at swiftly resolving issues and addressing specific requirements."

Maximilian UHLEMANN
Director of Information and Communications
Heidelberg Fire Department

Investing in Safety – State of the Art Radio Control System for the Berlin Police Dept.

Amidst the backdrop of increasing crime rates and a growing number of emergency calls, the importance of an efficiently functioning control center for coordinating operations cannot be overstated. To address these escalating challenges, a steadfast commitment to the modernization of technology and equipment is essential for authorities. In line with this commitment, eurofunk implements a groundbreaking solution: the Integrated Digital Dispatching System - Unified Communications IP Platform (IDDS UCiP), poised to replace the current wired digital radio system utilized by the Berlin Police.

Leo OBERAIGNER
Senior Sales Director

Communications system IDDS UCiP and the eDESKc – soon in use at the Berlin Police Dept.

Scheduled for operation in 2026/27, the Berlin Cooperative Control Center represents one of eurofunk's most extensive projects. Recognizing the pressing need for an upgrade to their radio control system, the Berlin Police Department has turned to eurofunk to implement the innovative IDDS UCiP solution. A comprehensive retrofit initiative is currently in progress, covering 57 strategically located workstations spread across 14 locations throughout Berlin. Among these, 40 workstations will be deployed at various command centers, while the remaining 17 will reinforce the Operations Control Center (ELZ - Einsatzleitzentrum) at Platz der Luftbrücke.

WHAT'S BEHIND IT

The IDDS UCiP communications system boasts a contemporary and innovative user interface, along with an adaptable, distributed architectural framework. This system equips Berlin Police personnel with the capability to seamlessly manage their routine digital radio communications.

At its core, the IDDS UCiP relies on state-of-the-art IP and VoiceoverIP (VoIP) technologies, ensuring uninterrupted digital radio utilization, even in cases of wired connections to the BDBOS digital radio network experiencing disruptions.

Complementing this robust communication solution is a resilient IT infrastructure carefully designed to balance redundancy and performance while meeting the unique requirements of the client. The foundation for connecting control center locations is an IP infrastructure featuring tailored quality of service. The central virtualization platform spans two sites across three data centers, guaranteeing continuous communication and operational functionality, even in the event of component failures.

EUROFUNK PROJECT – BERLIN COOPERATIVE CONTROL CENTER

The eurofunk Berlin Cooperative Control Center represents an ambitious undertaking in a city spanning 891 square kilometers, surpassing even Paris, and boasting over 1,700 bridges, exceeding Venice. This project marks a technological milestone, forging a crucial connection between the Berlin Police and the Berlin Fire Department, fostering enhanced cooperation between these esteemed organizations.

With meticulous blueprints approved by the organizations' specialist planners, the path forward is clear for achieving the next milestones. Beyond state-of-the-art control center software, eOCS, eurofunk will provide the complete IT and media technology infrastructure within the situation and control center premises. To complement these advancements, we are implementing cutting-edge 24/7 workstations complete with the eDESKc desk.

For more in-depth information about the Berlin Cooperative Control Center project, please visit the official homepage: https://www.berlin.de/kooperative-leitstelle/

Seamless Digital Case Forwarding between 116117 and 112

Martin JÖRG
Head of Division Products
Command and Control

The concept of facilitating a seamless nationwide call forwarding system between control centers appears promising and is on the verge of becoming a reality.

The 116117 patient service number holds national relevance in Germany and is overseen by regional associations of panel doctors (KV) across different German states. This service occupies a pivotal role in the German healthcare landscape, catering to patients requiring medical assistance in non-life-threatening situations. However, there have been instances where life-threatening emergencies have been reported through the 116117 number. In such critical situations, it is imperative to swiftly and accurately inform the responsible emergency service control center, ensuring immediate on-site assistance.

To achieve this, custom interfaces were established between the Central Terminal (CT) and adjacent control centers, facilitating effective communication. However, these interfaces exhibit limitations when it comes to cross-border operations. Furthermore, integrating control center systems from unknown suppliers demands significant technical and administrative efforts from both sides, especially in regions transitioning to digital networking where traditional fax and telephone systems are being dismantled.

Addressing these shortcomings, the **Central Institute of the Associations of Statutory Health Insurance Physicians (CI)** has initiated a project for interface standardization. In pursuit of this objective, CI has engaged the company Famedly to develop a vendor-independent, nationwide scalable interface for digital case exchange between 116117 and 112 control centers, leveraging CIMessenger technologies.

In the course of the project, a decision was made to utilize an existing specification for case exchange based on the **Universal Control Room Interfaces (UCRI)** interface established by PMeV (Professioneller Mobilfunk e. V.). Manufacturers now have the flexibility to employ UCRI data types natively with a matrix connector from Famedly or transmit and receive them directly without a connector via matrix.
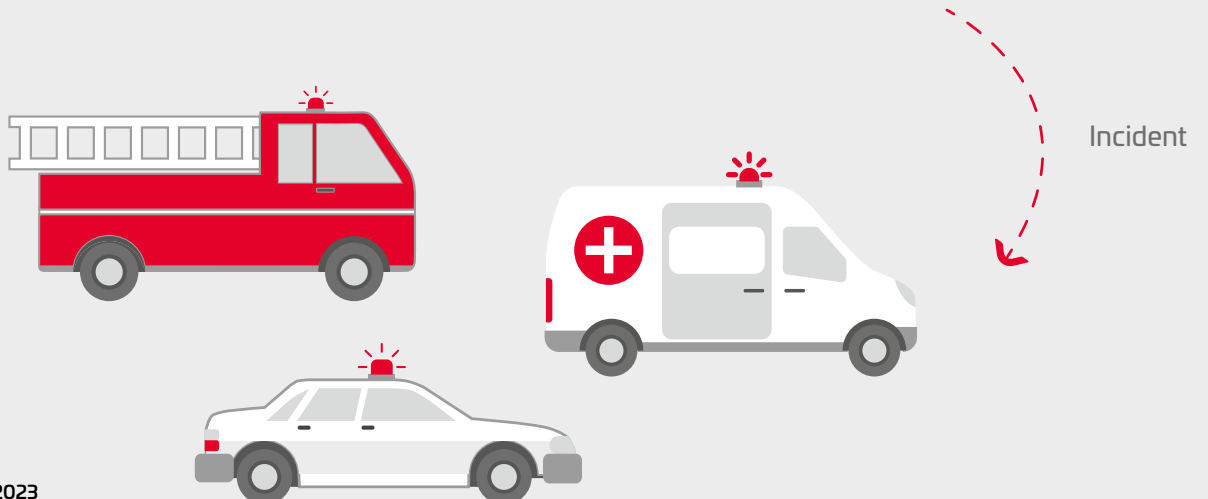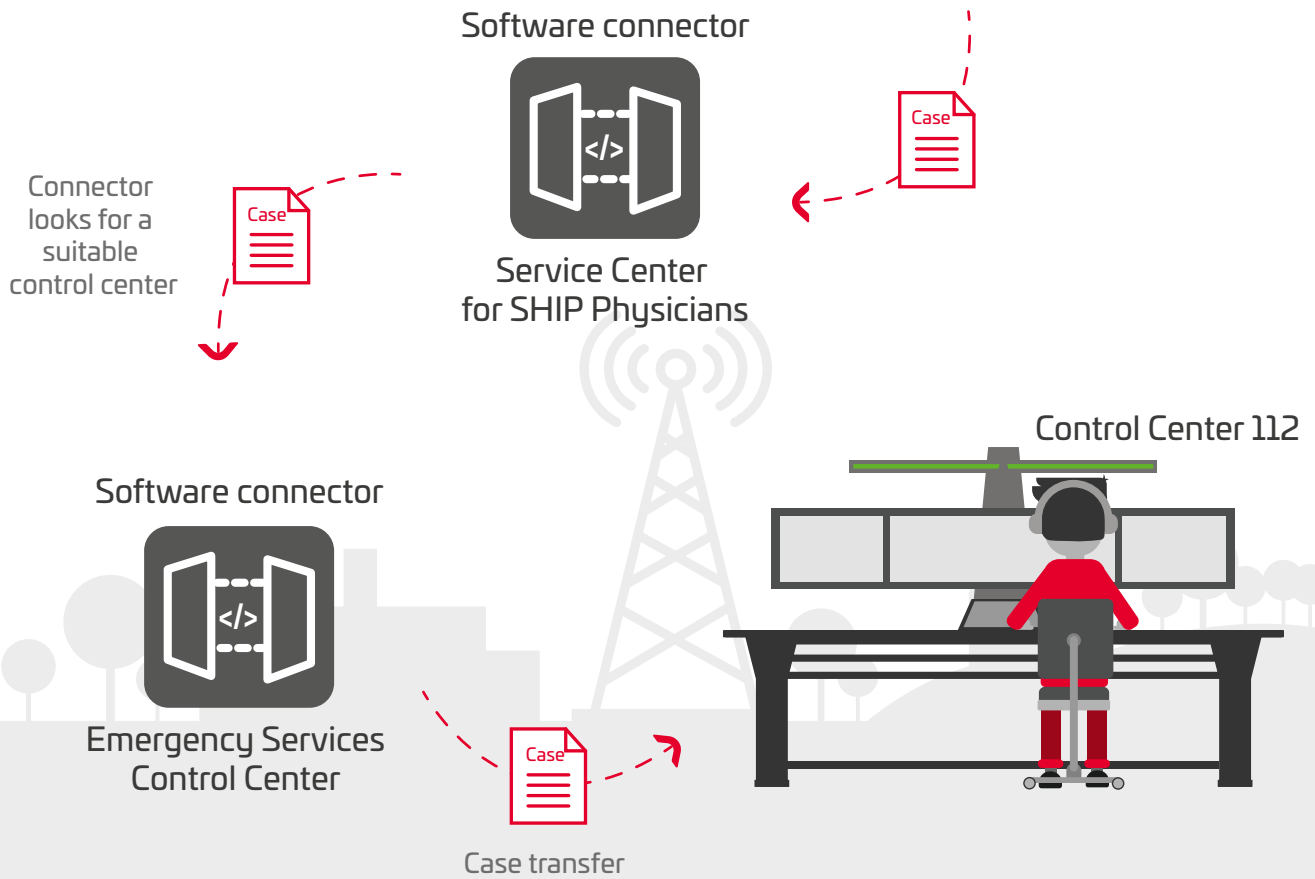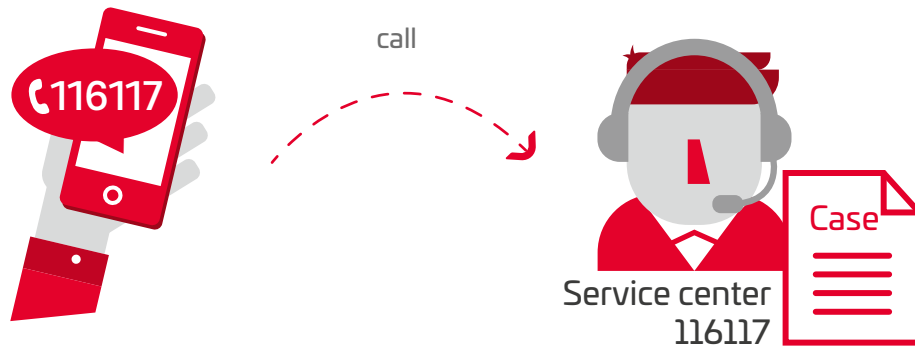
The matrix functions as a decentralized messaging infrastructure with end-to-end encryption in the background. This open-source technology is already in use by public authorities and within the healthcare sector, solidifying its suitability for this purpose.

To ensure that all control centers participating in the matrix network remain accessible and known, a **directory service** has been established alongside the matrix network. Consequently, each participating control center can serve as both a sender and receiver without the need for system adjustments in case of participant changes.

To maintain adaptability for future use cases, the data transmitted via UCRI adheres to the FHIR standard internally within the matrix. **FHIR (Fast Healthcare Interoperability Resources)** is a globally recognized standard for healthcare data exchange, offering future potential in this context.

In addition to Famedly GmbH, which is spearheading the project from a technical standpoint, several prominent ELS software manufacturers are actively involved. As of the publication of this article, the establishment of a testing environment is underway, with plans to gradually integrate it into regular operations by the end of 2023.

If your control center is interested in participating in this forward-looking network for data exchange among control centers, please reach out to your designated contact at eurofunk.

call

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Control Center

Case

Case transfer

Incident

⊙eSA eurofunk Station Alert Enhancing Sleep-Friendly Station Alert Solutions

In the realm of emergency response, it is commonplace for volunteer fire departments and rescue services to rely primarily on radio-based alerts. These notifications encompass a variety of digital radio channels, pagers, sirens, and mobile phone applications. Conversely, professional fire departments, often stationed within dedicated firehouses, predominantly receive acoustic alerts through Station Alarm (SAL) systems, coupled with automated building service controls. This comprehensive approach enables the activation of specialized alarm lighting circuits, the operation of exit gates, and the management of traffic light systems. To ensure that loudspeaker announcements during nighttime operations do not disturb unaffected crews or neighboring communities, it is imperative to tailor alerts to the required personnel and adapt them to the time of day.

Enter eurofunk Station Alert (eSA), a groundbreaking solution designed to address this critical need for targeted and non-disruptive alerting. Leveraging state-of-the-art VoIP voice processing modules, eSA is capable of managing up to 40 stations simultaneously while providing individual control over numerous public address circuits within each station.
To ensure precise notification of essential emergency services without disrupting the rest and well-deserved repose of others, the eSA system can selectively activate individual loudspeaker circuits tailored to specific areas within a room, as illustrated in Figure 1.

Fig. 1: Targeted alerting during resting periods

Outside of quiet hours, when the whereabouts of emergency personnel are uncertain, additional loudspeaker circuits are often integrated into the station alarm system. These distinctions, whether between day and night or other operational scenarios, are governed by predefined station alarm scenarios that are automatically activated by the system at the appropriate times. This approach ensures efficient and context-aware alerting tailored to the prevailing circumstances.

ARCHITECTURE (SEE FIGURE 2)

The redundant SAL interface component serves as the initial point of contact for external systems, typically Emergency Locator Systems (ELS) or communication systems. It effortlessly channels alarm requests to a selected SAL processor.

The Station Alarm (SAL) processor serves as the central component of the SAL, playing a pivotal role in its operation. It systematically handles incoming alarm tasks, categorizing them according to their respective priority levels, and momentarily stores them in a buffer. Additionally, the SAL processor ensures seamless communication with the external system via the station alarm interface, providing timely updates on task progress. Moreover, the alarm processor assumes responsibility for orchestrating the dissemination of audio signals to individual stations, thereby enhancing the overall efficiency and coordination of the system.

Each station is equipped with a SAL gateway component, which includes the electro-acoustic system (ELA) control and programmable logic controller (PLC). Thanks to its modular design, the gateway facilitates the integration of ELA and PLC products readily available in the market. Deployment options include embedding the gateway directly on-site within the ELA rack or configuring it as a Linux service centrally at a technical site in a virtualized environment.

Stefan HUTTER
Sales Manager

OPTIONS AND VARIANTS

In cases where external mission control or communication systems lack text-to-speech (TTS) support, eSA offers an integrated TTS option to bridge this gap.

eSA seamlessly interfaces with commonly used mission control systems and communication platforms. If an organization already employs the Integrated Digital Dispatch System Unified Communications Platform (IDDS UCiP), eSA can be integrated as an additional subsystem. This integration streamlines configuration efforts and simplifies the overall system architecture.
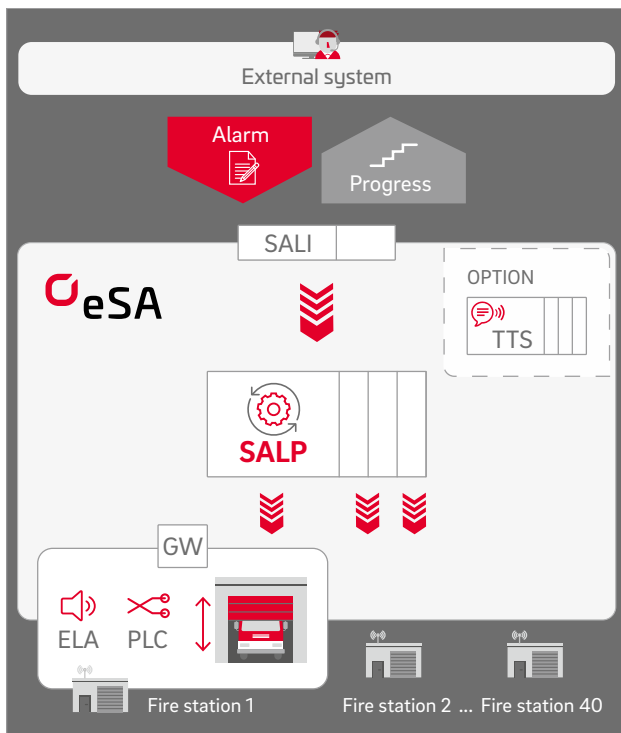

Fig. 2: eSA as independent system either with or without Text-to-Speech

SALI	Station Alarm Interface
SALP	Station Alarm Processor
GW	Station Alarm Gateway
ELA	Electroacoustic System
PLC	Programmable Logic Controller
TTS	Text-to-Speech

Additional features of eSA include:

- Efficient integration of station alerting into external systems is achieved through the automated processing of alarms and real-time status feedback, including notifications such as "alarm bell complete" or "announcement in progress".

- Buffered alarms and audio content ensure optimal chronological sequencing, allowing users to create audio recordings without concerns about concurrent system activity.

- In scenarios where audio content is transmitted as files, a dedicated file can be assigned to each station.

- Loudspeaker circuits, gates, emergency lights, and other Programmable Logic Controller (PLC) outputs are interconnected with what we refer to as "speech circuits." These speech circuits serve as a direct representation of emergency forces and resources. Furthermore, they have been meticulously engineered to streamline control through an operations control system.

- Following the initial setup by eurofunk, administrators gain full control through the user-friendly station alarm administration interface. This flexibility enables quick remote adjustments to room allocations, accommodating changes or renovations without impacting the operations control system.

- Emergency personnel can adjust their resting room assignments autonomously through a dedicated web application which has been integrated into the system's alerting mechanism. This guarantees that any alterations in room allocation are consistently taken into account during the alerting process.

resQnect

Personal and Vehicle-Related Alerting Solutions

resQnect DRIVE with optional infotainment integration

eurofunk, well-known for its extensive solutions in the control center sector, has expanded its range to encompass proprietary mobile applications designed to improve communication between control centers and emergency response teams. These state-of-the-art applications, named resQnect MOBILE and resQnect DRIVE, are accessible on both iOS and Android platforms. They streamline alarm activation, covering not only vehicle-related alerts but also those related to individuals.

The latest iteration of resQnect MOBILE introduces an innovative feature enabling the assignment of devices to emergency personnel through QR code scanning. This capability proves invaluable in scenarios where multiple individuals need access to a shared resource pool, such as digital radios. Historically, such allocations have been managed through diverse tools like Excel spreadsheets or roster modules. Nevertheless, this vital information has often gone unnoticed within operations control systems, especially for Public Safety and Security Organizations (BOS – Behörden und Organisationen mit Sicherheitsaufgaben). Traditionally, the primary focus has been on alerting vehicles rather than individual responders. Yet, acknowledging details like which individual is currently assigned to a specific vehicle or which (radio) device can be used to reach a particular person can yield significant advantages for dispatching, alerting, and operational communication, benefiting both control centers and emergency response teams.

Christian REPASKI
Product Manager Innovations

With the resQnect application, it will be possible to implement the following use cases in the future:

- Within ELDIS 3 and eOCS, the automatic dispatch suggestion function can now consider the qualifications of the on-duty crew in addition to the vehicle's equipment.

- Use Case for the Professional Fire Department: In cases of late-night station alarms, the resQnect MOBILE app can selectively inform or wake up only the crew members associated with the required vehicle.

- Using this information, the incident management system can establish a tactical unit, automating synchronization between the status changes of an HRT (Hand Radio Terminal) used by emergency personnel and the MRT (Mobile Radio Terminal) of the corresponding vehicle or the **resQnect app.**

Introducing resQnect WEAR:

As part of a successful pilot project conducted in collaboration with the Salzburg Fire Department, the resQnect WEAR solution has been tested as a complementary feature alongside resQnect MOBILE. Through resQnect WEAR, only the emergency personnel linked to the alarmed vehicle receive notifications of a new deployment via a smartwatch. These notifications are delivered through both tactile and auditory feedback mechanisms to minimize disruption to unaffected emergency responders, particularly during nighttime operations.

Moreover, the resQnect WEAR smartwatch solution is presently undergoing enhancements to integrate supplementary features, notably real-time status notifications. This breakthrough offers emergency responders enhanced flexibility in accessing digital services, and reduces their reliance on smartphones.

Responders can effortlessly connect to their assigned vehicle or HRT device from the pool by simply scanning a QR code. This information is relayed via **resQnect app** to the dispatch system, where it is temporarily stored and made accessible to control center personnel.

resQnect MOBILE connects to your smartwatch

Efficient Communication with IDDS UCiP Softclient and eTALK USB

IDDS UCiP-SOFTCLIENT

The IDDS UCiP softclient is a **versatile software solution** that can be easily installed on client PCs and notebooks. It offers a cost-effective way to enhance existing control center infrastructure. When combined with **eurofunk hearing and speaking devices** such as eHAP and eTalk, or compatible headsets, the IDDS UCiP softclient enables comprehensive communication with both emergency callers and response teams.

The primary use of the IDDS UCiP softclient is in Public Safety and Security Organizations (BOS - Behörden und Organisationen mit Sicherheitsaufgaben), especially in emergency scenarios and situation and control rooms. Control center rooms typically rely on primary workstations with additional hardware features, including multiple audio inputs/outputs, support for multiple loudspeakers,

and control center desk functionalities such as height adjustment, monitor positioning, and touchscreen tilting.

Control center operations have changed, however, in response to factors like the COVID-19 pandemic. The introduction of **remote office solutions for operators** was a significant development, made possible by the IDDS UCiP softclient. This software enables operators to perform their duties from remote locations. With its **easy installation** and expandability options, the IDDS UCiP softclient opens up new possibilities within the BOS sector. An excellent example is the efficient management of the COVID hotline in Austrian control centers, where the IDDS UCiP softclient's flexibility proved invaluable. These changes **introduce novel capabilities** and **enhance efficiency** within the control center environment.

One standout feature of the IDDS UCiP softclient is its seamless integration with system technology, much like a primary workstation. The same software used on main workstations is employed for the IDDS UCiP softclient, ensuring unrestricted **access to functions** such as emergency call handling, radio inquiries, and short-term documentation. The only exceptions are certain hardware-dependent functions available on main workstations, such as connecting numerous external loudspeakers without additional components. The IDDS UCiP softclient offers a unique advantage over primary workstations: the ability to configure **audio device setups** within the IDDS UCiP administration system. This functionality allows users to define multiple audio devices and their sequencing. Users can easily switch between these audio devices on the IDDS UCiP softclient. If the active audio device

PRODUCTS | SOLUTIONS | SERVICE

Harald VIEHAUSER
Head of Products
Communications

"

"The soft client proved invaluable to us during the COVID-19 pandemic. It allowed us to work from various remote locations and made service operations more flexible and mobile. Its user-friendly interface and swift capacity expansion were especially beneficial in facilitating our workflows during the crisis."

Peter Dioszeghy
Head of the Regional Control Center,
Red Cross Salzburg

becomes disconnected, the IDDS UCiP softclient will **automatically switch to the next operational audio device** as per the defined sequence.

Furthermore, eurofunk's **eTALK** and **eHAP** hearing and speech devices are seamlessly integrated into the audio device setup and can be used in conjunction with the IDDS UCiP softclient via USB connectivity.

In addition to its compatibility with IDDS UCiP, eHAP and eTALK devices are also compatible with a further eurofunk communication system: emc² VOIP.

eTALK

The eTalk device features two distinct loudspeakers, an internal or optional external microphone, and touch controls for volume and the talk button. It is specifically designed for desktop usage, facilitating two independent audio channels for hands-free microphone and speaker usage, along with a listening speaker. Optionally, an external speaker can be connected for brief documentation playback and call tones. eTalk offers various connection options, including a handset (e.g. eHAP), up to two hearing and speaking sets (headsets), and additional peripherals like a foot activated send button and busy lamp display.

Ways to connect to the eTALK

- a handset
  e.g. the eHAP
- Up to two listening and speaking devices (headsets)
  e.g. teacher/student mode
- Further peripherals
  e.g. foot activated send button and busy lamp display

eHAP

eHAP serves as a conference device designed as a telephone handset for radio and emergency call inquiries. It integrates the earpiece, microphone, and PTT (Push-To-Talk) button within an ergonomically designed housing. The eHAP variant with a USB interface (eHAP USB) complements the IDDS UCiP softclient, while the eHAP with a system-specific interface is available for primary workstations.

AAO & BAO
360° and Beyond

eurofunk and GEOBYTE have effectively integrated their solutions to proficiently manage a wide spectrum of scenarios, from routine operations to critical emergencies. This integration involves the implementation of a comprehensive operation and situation management process.

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Fig. 1: e-LAN Client application

"Simply put, overview does not mean ignoring the details, but seeing the details in a broader context."

(Hans-Jürgen Quadbeck-Seeger)

Ensuring prompt and efficient response to critical situations is of utmost importance for preserving lives and minimizing damage. This crucial responsibility falls on the shoulders of command and crisis teams, who rely on a specialized command and control system to assist them. This system plays a vital role in documenting the situation, creating situational plans, coordinating emergency personnel, and facilitating effective communication. eurofunk addresses this critical spectrum through its longstanding partnership with GEOBYTE and their extensively tested command and control system, metropolyBOS. The integration of metropolyBOS into the eurofunk operational control system, known as eOCS, provides invaluable support to both operational-tactical and administrative-organizational teams in the fields of civil protection and law enforcement.

The foundation for this synergy lies in the existing interfaces between eurofunk's mission control systems ELDIS 3 and eOCS, and GEOBYTE's metropolyBOS system. These connections ensure the seamless processing of operations across all command levels of the fire department and civil protection, without any loss of critical information. Moreover, for the police, these interfaces enable a smooth transition from the general organizational structure of the control center to the special organizational structure (BAO – Besondere Aufbauorganisation) of the command post. Several clients, such as the Stuttgart Airport, the Karlsruhe Fire Department, the Cooperative Regional Control Center West in Schleswig-Holstein,
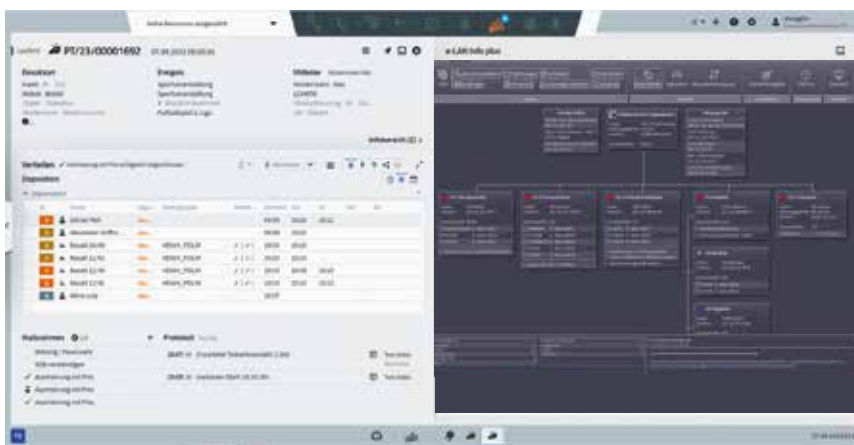
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Fig. 2: The e-LAN organigram is deeply integrated with the eOCS UI concept

Monika SCHNATTLER
Portfoliomanager

Roland LUTZ
CEO Geobyte

and the Hesse Police, have already adopted extensive solutions that vividly demonstrate the effortless interaction between eurofunk and GEOBYTE systems. These solutions have been rigorously tested in real-world situations and leverage a substantial number of offline-capable metropolyBOS servers. Another noteworthy project, the Cooperative Control Center Berlin, is currently underway, where metropolyBOS is being integrated as the command and control system for the police.

The connection between eOCS and metropolyBOS is quite complex. It involves a two-way interface that allows the police to transfer predefined situation scenarios from either the staff command system or the command center module to eOCS. This functionality enables the use of predefined response strategies for urgent situations, allowing for coordinated actions in both the central control center and multiple command centers simultaneously. This ensures that critical mission information is constantly shared and updated in both directions. Furthermore, metropolyBOS web modules can integrate into the operation information area of eOCS. This integration provides operations officers with valuable insights into BAO activities, significantly improving their awareness of the current situation.

The integration of metropolyBOS into eurofunk's 360-degree solutions marks a significant advancement in incident management. It covers a wide range of scenarios, from day-to-day operations within a fire department's command vehicle to large-scale nationwide situations where operations are coordinated and documented across multiple teams using eurofunk ELS systems. The GEOBYTE system plays a crucial role in facilitating various operations, whether in law enforcement or other contexts, by consolidating them into a comprehensive situation view. Within this framework, eurofunk's command and control systems take on the role of incident management, encompassing tasks such as collecting and processing information, as well as dispatching and alerting
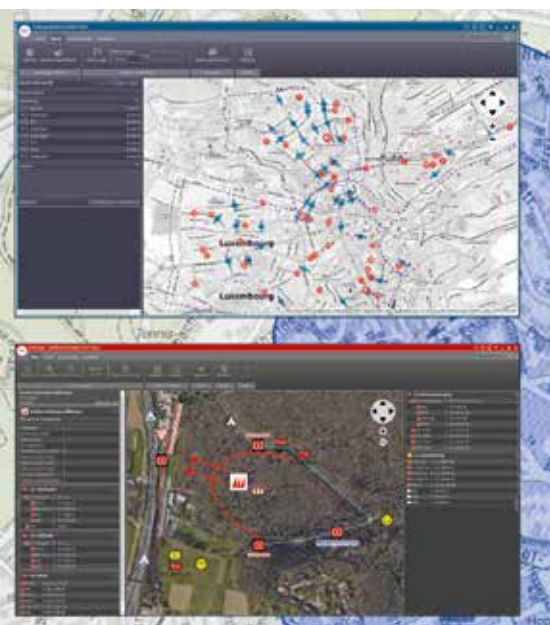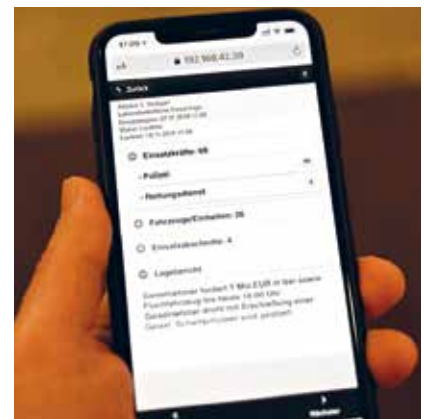

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Fig. 4: Mobile application e-MANV and e-LAN information (App)

emergency forces and resources. Importantly, this data is then made accessible to metropolyBOS for further utilization.

This seamless integration of information and perspectives within an operational command and control system enables the observation and comprehension of details in context from various angles, thereby averting the risk of overlooking critical situational aspects.

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Fig. 3: e-LAN situation map

Knowledge Transfer

Innovation

Openness

Cooperation

D
T E AM**W O R K**

eurofunk Academy

Work-Life-Balance

Company events

Game.Zone

V

Sustainability

Focus on employees

E

Get-Together

TOGETHE**RNESS**

R

SAFETY

S

Change

Personal Responsibility

I

Appreciation of Others

Mindfulness

T

Embracing new concepts

Open and Personal Management Culture

Flexibility

Meaningfulness

Y

Authenticity

RESPECT

QUALITY

Development

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Creativity

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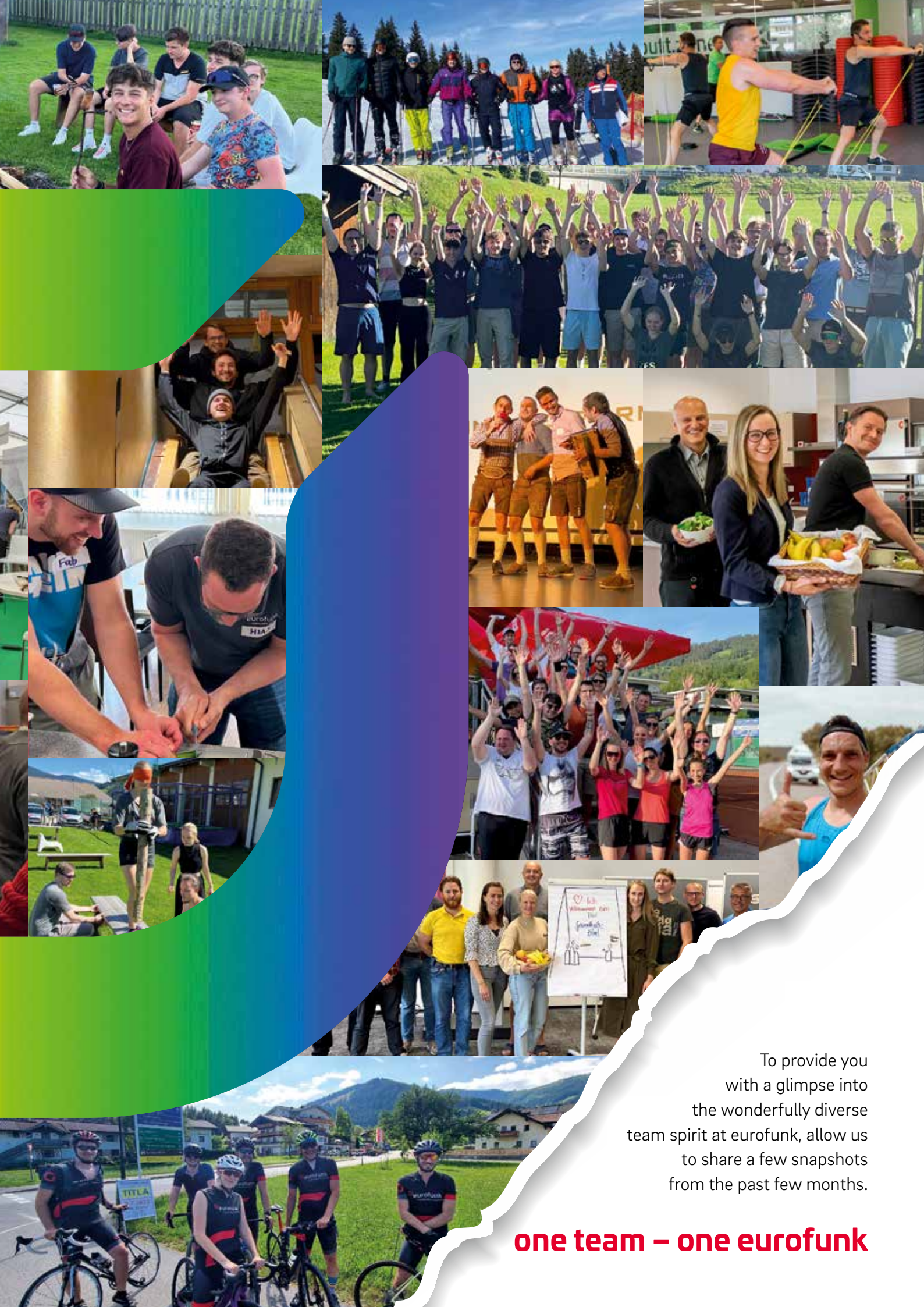
To provide you
with a glimpse into
the wonderfully diverse
team spirit at eurofunk, allow us
to share a few snapshots
from the past few months.

one team – one eurofunk

With Sustainability to Certification

Natalie HELBLING
Sustainability Manager

Sustainability has long been an integral component of euro-funk's daily operations and the decision to pursue ISO 14001 certification has put further emphasis on the importance of this commitment. In addition, our discerning customers are actively integrating sustainability requirements into their supplier evaluation criteria, particularly in the demanding context of control centers where system reliability is of paramount importance. In this context, our purchasing strategy prioritizes hardware suppliers that employ energy-efficient and low-CO_2 emission products throughout their production processes.

SUCCESSFUL CERTIFICATION AUDIT

In November 2022, eurofunk successfully achieved ISO 14001 certification, adding to our existing ISO 9001 and ISO 27001 certifications. This accomplishment was made possible by creating a comprehensive environmental management system. This system was carefully developed to define and continuously enhance our operational procedures, with a strong emphasis on improving our sustainability efforts. Implementing this environmental management system enables eurofunk to set and actively pursue sustainability goals while maintaining strict adherence to environmental regulations and guidelines. Furthermore, our management system simplifies the process of establishing objectives and implementing actions to advance our sustainability initiatives.

SAVINGS INITIATIVES

Historically, eurofunk's average annual electricity consumption amounted to approximately 1,400 megawatt hours. Since the summer of 2022, we have installed 1,200 photovoltaic panels, boasting a peak power output of 500 kWp, on the roofs of our St. Johann headquarters. This photovoltaic system now generates approximately one third of our total electricity consumption at the site, resulting in substantial cost savings and a notable contribution to our sustainability efforts. Furthermore, we have optimized air conditioning controls, ensuring a minimum room temperature of 24°C, and adapted automatic lighting controls to minimize unnecessary illumination. These measures have significantly improved our energy efficiency.

BUSINESS TRAVEL VS. COMMUTING

In 2022, eurofunk employees commuted to work a total of 12 million kilometers. Surprisingly, this is less than the total distance they traveled for business trips. Thanks to our flexible work-from-home options, we managed to reduce these commutes by almost 20%. We also introduced a carpooling platform to encourage employees to share rides, and we provided eco-friendly train tickets for both business and personal travel at all our locations. These endeavors underscore our dedication to conscientious resource management and our drive to create a favorable environmental footprint.

ONGOING COMMITMENT

Our employees actively engage in ongoing initiatives and receive encouragement from our environmental management team to pursue additional activities. Suggestions for improvement are consistently evaluated and discussed in a monthly meeting of the eurofunk Sustainability Board. This board comprises managers from all areas responsible for translating these measures into actionable organizational practices.
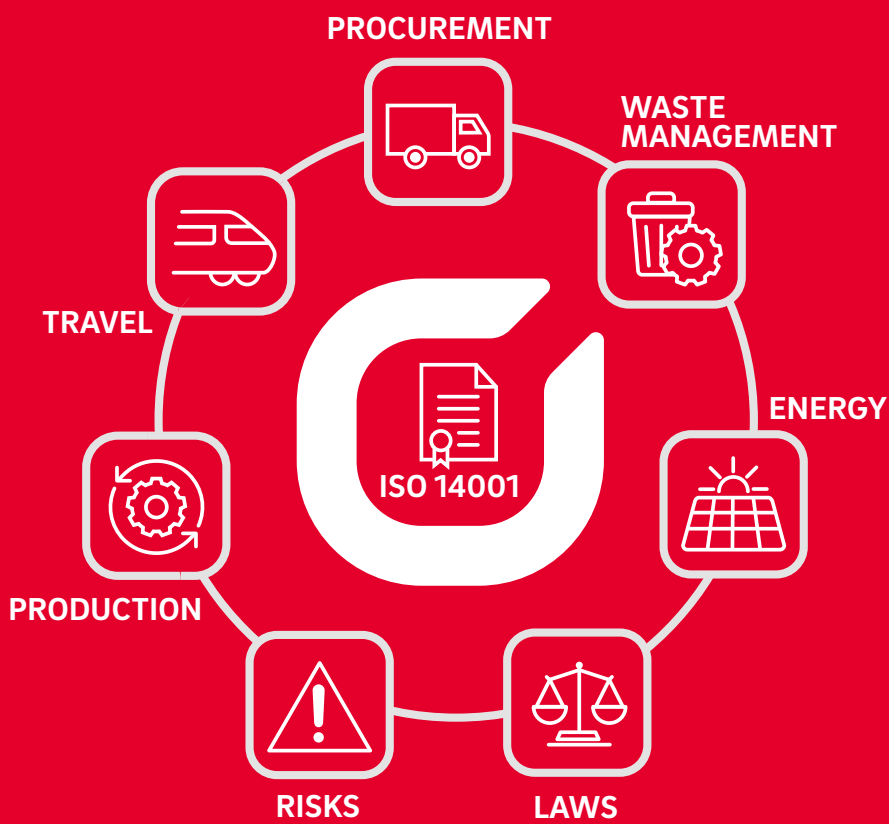
"Here in the mountains sustainability is a fundamental value. eurofunk management is committed to further integrating this principle into our organization to help ensure a sustainable future for generations to come."

Christian Kappacher
CEO

PROCUREMENT

WASTE MANAGEMENT

TRAVEL

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