key touch®

customer magazine
2/2014

Power up!

Night vision for the night shift

Lines of communication

WHO'S IN THIS ISSUE?

Want to know a little more about some of the experts who contribute to Key Touch? Look no further.

PETRA VAKIALA has been part of the Key Touch family since 2008. As senior editor her role is to manage the editorial crew and make sure the magazine comes out on time. Petra also enjoys writing herself; one of her articles for this issue discusses cell phone use in public safety and why it's best avoided. "I wish you educational and enjoyable moments with Key Touch!" says Petra. *@petravakiala*

TIINA SAARISTO has been Editor-in-Chief for Key Touch magazine since 2003. "Writing for the magazine resembles my favourite hobby, quilting, where small pieces are sewn together to create a fascinating result," she says. *@tiinasaaristo*

ANKE STURTZEL is responsible for promoting Airbus Defence and Space in the international Professional Mobile Radio (PMR) trade press. Based in Paris and working with people around the globe, she also ensures Key Touch has stories on all the latest events and developments at Airbus Defence and Space. *@ankstur*

JOUNI KEMPPAINEN With a background in the paper industry, Jouni has been a member of the cheerful TETRA team at Airbus Defence and Space for a year. His life-long interests have been in computers and technology and he now also focuses on IT, global trends and new media. During his free-time, Jouni likes to get out into the natural world, developing his skills in hunting, fishing and photography.

SATU LAMBERG feels lucky to live in Finland where there is a strong and well used nationwide TETRA network with many advanced applications. Reliable and seamless communication is vital for the organizations that use the network, but it also helps to keep us all safe.

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AIRBUS DEFENCE & SPACE

A look at what's to come

AS ONE of the world's most technologically advanced nations, Singapore is a perfect setting for this year's Critical Communications World (CCW). When it comes to safety and security in the city, we are currently doing our part, by giving Singaporean agencies real-time access to video from cars. This helps them to respond more quickly to unexpected events and to ease decision-making.

To show the visitors of CCW the flexibility and the complementarities of Airbus Defence and Space solutions, we've divided our presence at the show into four distinct areas. The first is aimed at public safety, focusing on how users and organisations can perform operational tasks more effectively. Good examples include integrating data with operations and improving co-operation between command and control and field units (pages 14 and 21).

Our other CCW areas take a broad look at broadband, showing what the future holds and the many benefits to be had from the technology, and present new ideas for communications in two specific sectors - oil & gas and transport.

As secure communications are vital to improve safety and efficiency in day-to-day oil & gas operations, Airbus Defence ans Space's Claricor® 3 solution shows what's possible in small to medium-sized networks, while on a much larger scale our TETRA network is helping secure one of the world's longest oil pipelines.

When it comes to the transport sector, there is growing demand for indoor coverage in stations and tunnels. One great way to deliver that coverage is the new, world's smallest, high power TETRA base station, TB3hp which is being launched in Singapore. To mark the product's unveiling, page 12 of Key Touch takes a look at what it is and what it does for transport applications.

Last but not least I also want to mention our article page 31 that explains how the slim and light TH1n is not only a basic TETRA radio, making it a perfect solution for covert use and paging, but can also function as a DMO repeater.

I wish you a very pleasant reading of this Key Touch issue which addresses all the most important parts of the CCW but also other key topics such as the latest news on Tetrapol, or how to choose the best network for your operations. But as ever, Key Touch is mainly about the possibilities ahead and how Airbus Defence and Space can help you picture your future.

Nicole Lecca
Senior Vice President
Secure Land Communications

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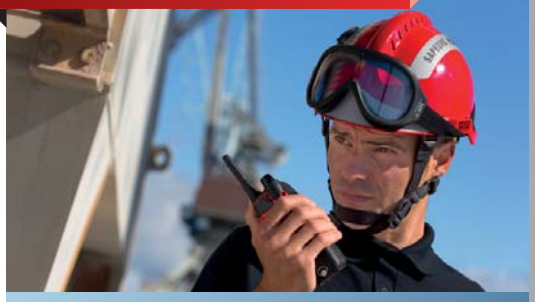

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The IP10 Tetrapol release gets the perfect score. Users will appreciate the complete set of features, and network operators and owners will welcome the OPEX savings that it can bring.

SENSATIONAL RADIOS

30 Night vision for the night shift

Activate Night Vision to change the radio display to a darker and less aggressive colour scheme, which gives better visibility in dark environments.

Here for the future

From the latest radios to the smartest networks, Airbus Defence and Space is using Critical Communications World 2014 to show how professional organisations can collaborate and share all the information they need to tackle the most demanding missions.

Visit the Airbus Defence and Space A301 to see the future of professional critical communications.

If you missed Critical Communications World 2014, go to www.cassidian.com/ccw

4

1 TRUSTED PARTNER FOR PUBLIC SAFETY

P8GR active TETRA pager; THR9i with accessories; TH1n 800 MHz with new covert accessories; Next generation command and control: Call taking with IDS 9700, RCS 9500 dispatching and emergency notification; Vehicle communication: TMR880i and wireless RCS 9500 with touchscreen

Discover how to execute tasks more effectively, integrate data with operations and improve cooperation between command and control and field units.

Learn about the RCS 9500, the new superstar of dispatching (page 14)

Find out how the slim and light TH1n is not only a TETRA radio, for covert use and for paging, but how it can also function as a DMO repeater (page 31).

2 SOLUTIONS FOR METROS AND AIRPORTS

Claricor 3 with TB3hp; TH1n with accessories; TMR880i with use panel – send a text quickly to a display panel; Airport apps; SMS-SDS gateway; Checking a database using a TETRA radio

See how radios work in underground areas, stations and tunnels. A perfect solution for transport applications is the new, world's smallest high power TETRA base station, TB3hp (page 12)

Airbus Defence and Space's TETRA radio communication systems help improve passenger safety and play a key role in emergencies (page 38).

3 SMART SOLUTIONS FOR OIL AND GAS COMPANIES

Claricor® 3 radio network for oil and gas; THR9 Ex radios with ATEX accessories; TDM880i data module for SCADA applications; OM100 mapping application; Satellite connection; VSAT services

Learn how secure communication networks can support daily operations and improve safety and efficiency.

Airbus Defence and Space has a long track record: our TETRA network is helping secure one of the world's longest oil pipelines (page 43).

4 BROADBAND DATA COMMS

Broadband mobile group communication application using smartphone and tablet; new high-power modem and LTE eNB 400

See the future of broadband, the benefits it brings and how to get it.

Discover an LTE-based CCTV solution that gives Singapore Police real-time access to video from cars in the field (page 10).

Making cities safer

Did you know that by 2020, 60% of us will live in cities? That the number of urban residents is growing by nearly 60 million every year? That by 2050, the number of people living in cities will reach 6.4 billion?

These staggering urban trends show the scale of the problem for city authorities as they try to keep the burgeoning populations safe.

As cities grow in size, they lead to communities becoming more heterogeneous, giving a higher potential for threats and more widespread effects when serious incidents occur. At the same time, rising manpower costs force urban leaders to look for smarter ways of keeping their cities safe.

Relying on real-time comms

One of these smarter ways is to provide real-time communication for authorities, using TETRA from Airbus Defence and Space to help them meet their responsibilities despite limited resources. Better communications would also help improve community policing, as well as achieve tighter co-operation between the authorities and citizens.

A step towards better community policing is the introduction of a new way of communicating, which allows people to inform authorities of crimes and safety problems via text messages. Large numbers of CCTV security cameras in places such as markets, public transportation

and shopping malls bring an extra level of security and safety to citizens.

Effective communications solutions for authorities are vital for fighting social unrest, crime and terrorism and system integration is the key to the success of this program. Radio and data communications, command and control solutions, emergency response systems and public warning systems all have roles to play.

What is a 'safer city'?

A safer city is ultimately about protecting people, but it also means effective protection for the infrastructure, utility services and communications that keep people healthy and allow the city continue to function as a home and workplace for so many people.

Airbus Defence and Space's urban security solutions can support authorities to manage and prevent problems such as social unrest, crime and terrorism. Solutions here can include surveillance, video analysis, monitoring of the web and social media and using patterns of data to predict crime.

For example, critical sites - such as utility infrastructure– can benefit from a security solution that can give better situational awareness than guard-based security. Cyber solutions protect industrial control systems from cyber-attacks and assure continuity of production. Smart decision-making tools understand and predict different security alerts and their potential impact.

An example of these advanced technologies is being tested in Singapore. The aim of the new system is to allow the Singaporean government to respond more quickly to unexpected events. Airbus Defence and Space was able to draw on its experience in the area of military surveillance to for example, upgrade the video surveillance system to add voice, sound, facial and number plate recognition.

Read more about these tests on the next page.

Safer city with **video**

A vehicle mounted, LTE based CCTV solution from Airbus Defence and Space is giving the Singapore government agencies real-time access to video from cars in the field.

Singapore, one of the most technologically advanced nations in the world, is also one of the most densely populated, with over five million people living on its 710 square kilometres.

Information in real time

The Singapore government agencies are testing the CCTV solution as part of the Safe City Test Bed project, supporting them in responding as quick as possible to unexpected events by having flexible access to real time information in the city.

A joint solution developed with Alcatel-Lucent, the CCTV system performed far beyond expectations during trials. The solution consists of the newly developed Airbus Defence and Space LTE products multi-standard base station (eNB 400) and high power (HiPo) modem and the micro core of Alcatel Lucent. Base station and modem are to be launched at CCW 2014 in Singapore.

As part of these tests, a car of the Singapore government agencies, equipped with a vehicle mounted CCTV solution and the HiPo modem, allowed the officers to control the camera using pan, tilt and zoom controls and capture high quality video.

Easier decision making

At the same time, the video was sent in real time to the control centres to support decision making, using the 400 MHz band operating in a 1.4 MHz channel. Even when in a multi-storey car park, the quality of the transmitted video exceeded expectations. In addition to the real time transmission, a video stream was recorded locally in the vehicle and was then exported to a laptop for investigation. The video encoding was adapted in real time to the available data transmission rate depending on actual propagation conditions.

Better preparedness

Damien Moscetti, Program Manager of the Safe City Test Bed at Airbus Defence and Space, says: "The Safe City Test Bed project in Singapore focuses on upgrading and enhancing infrastructures with alert systems and sensors providing earlier warnings of incidents, so that the public agencies can be better prepared."

What is...

...TETRA?

To be effective, professionals working in the field need to be able to communicate. Secure, digital radio communication is the solution for flexible and efficient communication in the field. Push to talk is one of the key features of professional mobile radio. It means instant communication between two or more people simply by pressing a button, and it is the big difference to a mobile phone.

One of the leading standards in digital radio is TETRA, TErrestrial Trunked RAdio. TETRA fulfils the needs of professional users and replaces old analogue radio communication systems that no longer meet modern needs.

TETRA communication solutions from Airbus Defence and Space meet the requirements of professionals and offer significant, unique advantages.

...LTE?

Digital professional radio networks like are excellent at keeping emergency services in touch. But can emergency service professionals use broadband data?

LTE or Long Term Evolution is a broadband data service and it can complement TETRA, offering the ability to stream high quality video and transport very large data files, for example.

...Trials?

Airbus Defence and Space has conducted LTE trials together with their customers in France, Spain, the Middle East and Mexico. The trials proved that broadband capabilities can be added to existing radio networks. What's more, existing sites and neighboring frequency bands can be used. The major component in the trials was a dual-mode base station developed by Airbus Defence and Space and Alcatel-Lucent.

Spot the differences

Compare these two TB3p-series base stations and see how fast you can find the two differences!

Can't spot them? You'll find the right answer from www.keytouch.info.

The TB3hp (above) and the TB3p (below)

TB3hp

World's smallest and smartest TETRA base station, NOW WITH EVEN MORE POWER

The new TB3hp mini high power TETRA base station from Airbus Defence and Space is the world's smallest high power TETRA base station, offering up to 50% more radio coverage than its little sister, the TB3p.

The TB3hp provides up to 15W radio frequency power with very low power consumption. Despite its small size, the TB3hp offers the same powerful features as its bigger brothers the TB3 and TB3c TETRA base stations, guarantees the same high reliability and can additionally be installed in a vehicle to provide rapid deployment coverage. It is available in one- and two-carrier variants in multiple frequency bands.

Suitable for establishing wide area radio coverage, it can be used for a stand-alone set up as well as part of a bigger TETRA network. It can be also be used to provide coverage for areas with temporary radio network coverage needs. The TB3hp's high RF-power also enables very good coverage in situations where two TETRA carriers are combined to a single antenna, for instance, for tunnel coverage with leaky feeders.

Like its little sister the TB3p, this new base station from Airbus Defence and Space is approximately the size of a briefcase. One person can easily carry it to the site, install it and set it up within minutes. Once up and running, the TB3hp can be operated and maintained over a remote connection, with no need for costly site visits.

The new TB3hp base station is the latest addition to the comprehensive TETRA solution offering from Airbus Defence and Space. Deliveries will start in summer 2014.

The new Superstar of dispatching

Confidential communications should be, well – confidential. The latest 3.0 version of the Airbus Defence and Space RCS9500 Integrated Communications Control System achieves just that. It offers support for native end-to-end encryption that terminates on the user machine, not in a data centre that is more at risk of being compromised by foreign security organisations.

The benefit is absolute privacy of information. Theoretically, an attacker can compromise your air interface, tap into your transmission lines and penetrate your data centres. Despite their best efforts, with the RCS9500 implemented, they will still not be able to hear what you're saying.

Something also new in 3.0 is the ability to add more monitor speakers (up to 12 more) at the dispatch console with the SAM Speaker Expansion module. By having more speakers, the dispatcher can assign different TETRA Groups separately from other Groups thus allowing the user to better distinguish monitoring audio.

Distributed architecture with direct IP or E1 transmission

Designed for resilient communications, the RCS 9500 version 3.0 radically increases the flexibility of the architecture of dispatching systems. It can connect to a TETRA switch directly, with no need for a TETRA Voice Gateway or TETRA Connectivity Server.

The distributed architecture allows the use of TETRA coded IP transmission between RCS 9500 consoles and a TETRA switch. Alternatively, a dispatch position can opt to use E1 transmission like the DWS C does today. This means the DWS C can be replaced with an RCS 9500 for remote work positions and for control rooms which are migrating to IP transmissions.

What is new in a nutshell

RCS 9500 version 3.0 brings full end-to-end encryption, IP and E1 support between dispatch console and TETRA switch, and centralised user interface layout distribution.

3× Stress free communication

1) RCS 9500 connected to TVG and TCS
Network control rooms. A power machine of major dispatching centres enables sharing of workload with networked control rooms.

2) RCS 9500 direct connectivity
Communicate in confidence. End-to-end encryption protects all your messages, from your desktop to your recipients.

3) RCS 9500 Wireless
Comms on the move. Vehicle and remote users communicate effortlessly by linking RCS 9500 with a TETRA radio.

This gives the architects of control rooms the freedom to design a solution that uses the best parts of their existing infrastructure while benefitting from new transmission technology where available.

Centralised distribution of user interface layouts

You are secure, flexible and resilient. But how do you keep all the James Bonds out there in control, while remaining cost-effective? The answer is the RCS 9500 v3.0 centralised user interface layout distribution.

The RCS 9500 user interface is completely customisable by administrators, who within seconds can put onto the screen the functions that dispatchers need at each stage of operations.

Version 3.0 offers centralised management of these layouts. Once a layout is created, an administrator can push it to the consoles of all dispatchers in a nation, quickly and easily.

Get more information

Missed our live shows at Critical Communications World, Singapore? No worries - contact marketing@cassidian.com to get more information on the new RCS 9500 version 3.0.

MVNO – what's it all about?

MVNO or Mobile Virtual Network Operators, is a hot topic right now, driven by a growing need for new applications and devices for mobile data.

Yet, how many people know what the term means, let alone what it implies for the industry? The answer is precious few. A recent workshop held at Critical Communications Europe in March opened with a question: "Do you know what MVNO means?" Of the 54 participants, only five raised their hand.

At the end, the participants of the workshop - operators, authority organizations, vendors from the network industry and consultants – were asked what the most important feature was in a secure MVNO service. The top three answers were availability, security and wide coverage, including outside urban areas.

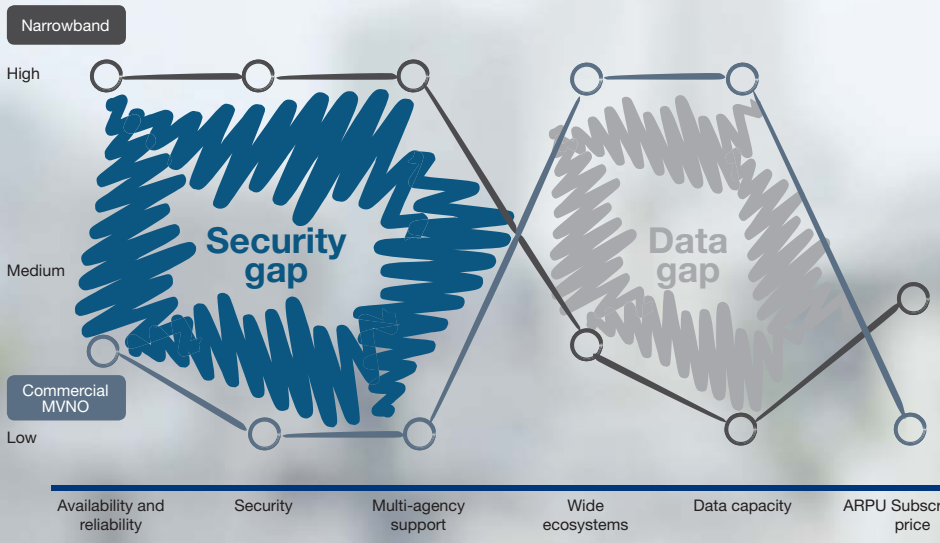
So what is the challenge that MVNOs can address and what do they offer?

Meet Joe

Joe Black is a member of the special operations force of the police service. One thing Joe cannot understand about his job is why he cannot use similar devices at work that his kids use at home and that seem so capable.

The answer is that the technol-

Both narrowband and commercial networks have gaps in performance



ogy used at home cannot guarantee the coverage, availability and security that are critical for Joe and his colleagues patrolling the streets. This is where commercial broadband is suffering from a security gap, and where secure radio networks deliver big time.

But we also know that police, rescue departments, military, border control and other public safety workers want to use video, mobile office applications and even social media platforms in their jobs. This is where secure radio networks have a data gap.

Joe can get the best of both worlds

It is good news that Joe Black can have it all: coverage, availability, security; and a wealth of data services. Airbus Defence and Space has the solution – Tactilon® Suite for secure MVNO.

The Tactilon Suite makes it possible to use several commercial networks in parallel with the secure radio network. This delivers the needed broadband data services but with significantly improved reliability and availability. In short, the Tactilon Suite provides commercial broadband network characteristics while meeting public safety needs.

For public safety organizations, the Tactilon Suite is a quick way of getting the new technologies and mobile data into full use in public safety work without compromising the safety of their workers. For making use of new technology, it is a far superior solution than public mobile broadband can ever provide.

For the secure radio network operators, the Tactilon Suite is a way to stay relevant for customers by offering a quick way to respond to customers' mobile data capacity needs. Rather than making dedicated public safety mobile broadband irrelevant, it makes it easier to move towards it.

The secure radio network operator can provide the best availability, coverage and security for mobile data, and the first responders can continue to rely on their secure radios wherever they are.

The Tactilon Suite is already in action, proving its merits in trials in Europe.

A PERFECT TEN: IP10 FOR TETRAPOL NETWORKS

The IP10 Tetrapol release gets the perfect score - users will appreciate the complete set of features, and network operators and owners will welcome the OPEX savings that it can bring.

Tetrapol IP04 and IP05 releases were the previous steps en route from Tetrapol TDM to the world of IP. Now, the IP10 release completes the path and includes the complete set of features required for a modern, professional mobile radio network.

Users in the new Tetrapol IP10 radio networks will have the use of super-fast group calls, a variety of emergency calls, broadcast calls, and individual (one-to-one) calls. In addition, users can have encryption schemes specific to their organization, as well as tactical network and user management.

The network operator and owner can replace the costly X25 connections between switches and base stations with IP connections, considerably reducing the OPEX.

Where IP outperforms the TDM

New equipment in the Tetrapol IP system packs more into a smaller frame, thanks to the new multi-core CPUs and virtualization. For the network operator and owner, this means fewer pieces of equipment to maintain, again cutting OPEX.

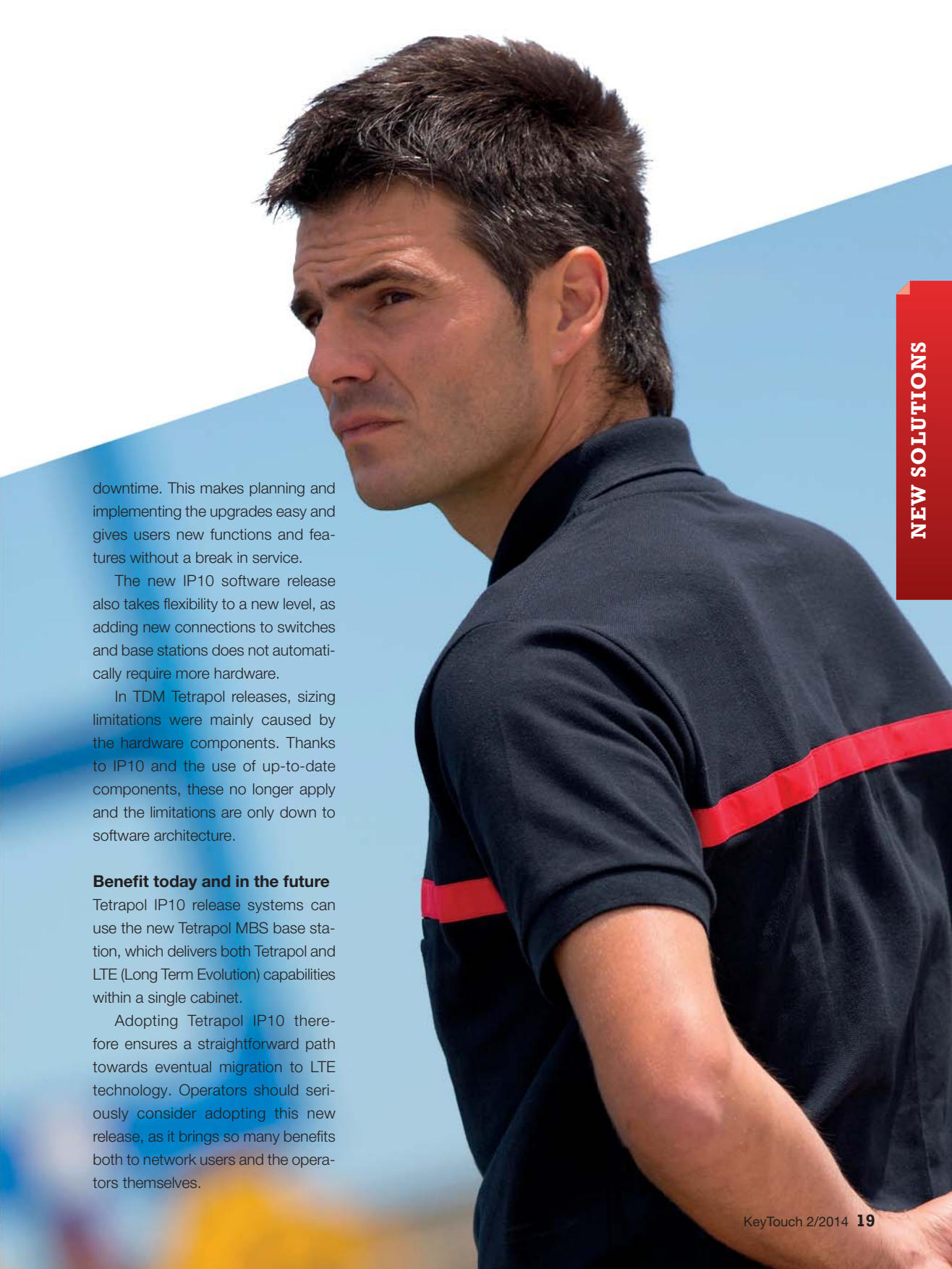
The IP architecture opens the door to choosing backbone equipment from a wide variety of options. It also means users can now take advantage of IP architecture, multicore CPU, native background software downloads or virtualization.

This IP10 release takes fully benefit from a new generation of COTS components, making obsolescence due to hardware and TDM links no longer an issue.

IP10 keeps legacy Tetrapol services for existing users and removes sizing limitations with improved architecture principles.

Easy upgrades

With the new switch, software upgrades can be introduced without



downtime. This makes planning and implementing the upgrades easy and gives users new functions and features without a break in service.

The new IP10 software release also takes flexibility to a new level, as adding new connections to switches and base stations does not automatically require more hardware.

In TDM Tetrapol releases, sizing limitations were mainly caused by the hardware components. Thanks to IP10 and the use of up-to-date components, these no longer apply and the limitations are only down to software architecture.

Benefit today and in the future

Tetrapol IP10 release systems can use the new Tetrapol MBS base station, which delivers both Tetrapol and LTE (Long Term Evolution) capabilities within a single cabinet.

Adopting Tetrapol IP10 therefore ensures a straightforward path towards eventual migration to LTE technology. Operators should seriously consider adopting this new release, as it brings so many benefits both to network users and the operators themselves.

Time to get a shiny new base station?

Car fever, that urge to invest in a brand new shiny vehicle, can strike anyone, anytime, but most often in the spring! Maybe it's also time to upgrade your base stations? Choosing the right one can help you to optimize OPEX, secure long term investment and prepare for the future.

And Airbus Defence and Space has just the answer with the launch of its stunning new base station. Known as the Multi standard Base station, or MBS, it gives operators exactly what they need.

Optimize your OPEX

As government budgets are cut everywhere, the need to drastically reduce operating costs becomes ever more urgent.

This is where the MBS excels. Based on multi-standard and multi-carrier technology, the frequency plan of the installed base is managed from the office, cutting site visits. It is very easy to add broadband data services to the network without disrupting the voice service.

Upgrading the MBS is as simple as downloading some software from the Web. There is no equipment to connect or install so there is no need to be on site.

Secure long term investment

MBS is scalable for radio cells of different radio channel capacities, meaning it can readily cope as networks expand. It is also based on a reliable platform with high-availability components and hardware redundancy, avoiding any single point of failure.

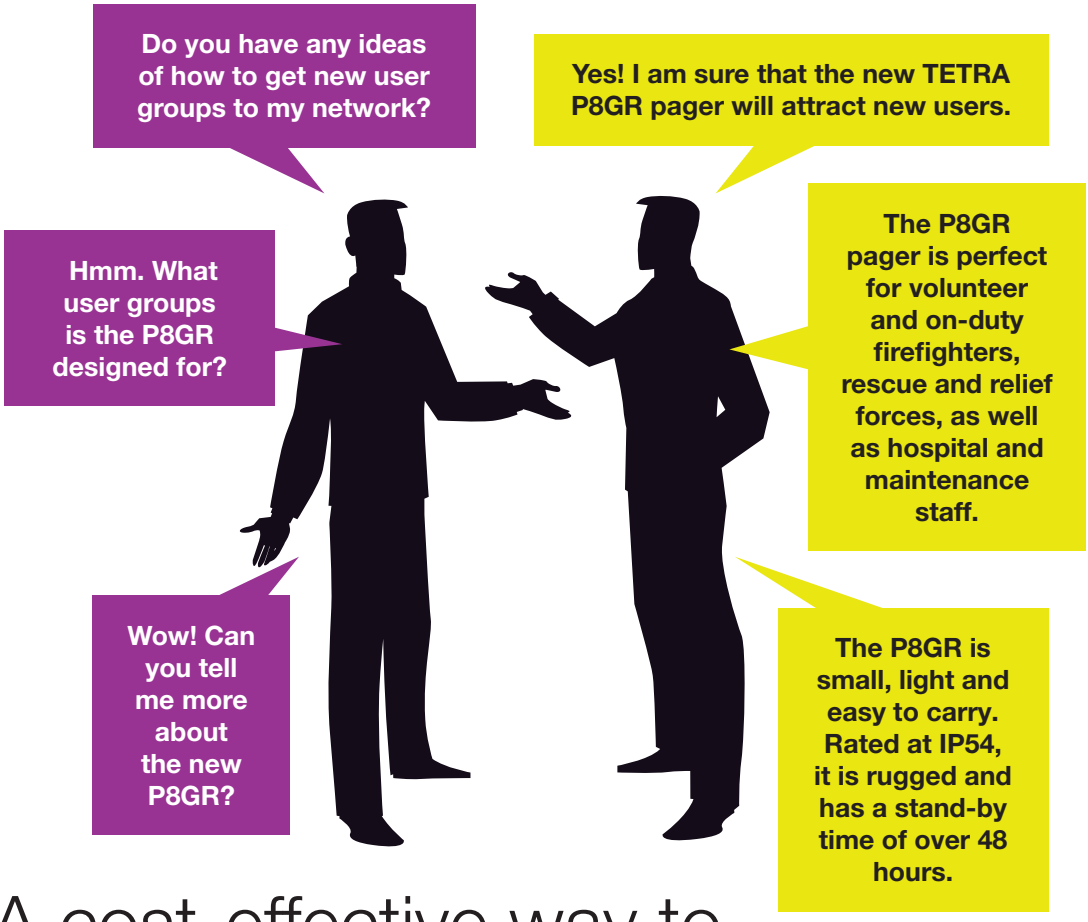
As Public Safety network operators are expecting to extend the long term support of their installed base beyond 2020, MBS has been designed to upgrade the legacy installed base without any impact on existing radio sites.

Prepare for the future

Commercial broadband standards cannot provide the key features that TETRAPOL can, such as group communication, end to end encryption, broadcast and multicast communication.

That's why TETRAPOL will continue as the basis for mission-critical voice services for many years.

Users also need to be confident their systems will support tomorrow's ways of working. MBS will play an important role for broadband service users, supporting TETRAPOL today and LTE 400 tomorrow in the same cabinet.



A cost-effective way to **keep staff on call**

Using your TETRA network to alert people with TETRA pagers is a cost-effective way to get communication performance without major network investments.

The new P8GR TETRA Pager brings the full benefit of TETRA networks for secure two-way alerting of personnel. P8GR offers excellent coverage with a compact design and an internal antenna. TETRA interoperability together with support for the of Call-out feature, makes P8GR an ideal tool for alerting both professional and volunteer workforces.

See more on www.P8GR.com

CUSTOMER WIRE

Good news for TETRA in Jordan

TETRA radio terminals from Airbus Defence and Space are helping safeguard one of the world's oldest countries. JETEE Kamal Abbassi & Sons Co. is making inroads into Jordan through a strong partnership with Airbus Defence and Space, helping the distributor to serve a new and challenging market.

Jordan's secure communications market is well-structured. A single army organisation manages the nationwide TETRA network and provides the armed forces, public safety, police security agencies and the civil defence with a capable communication system. "However, each of these organisations procures its own handheld terminals based on very strict technical specifications," says Fadi Darwish, Sales & Business Development Director at JETEE.

The Jordanian market was previously unknown territory for Airbus Defence and Space's TETRA radio terminals. Established in 1981, JETEE started a telecom department in 2009, adding secure communications in 2013.

"We knew Airbus Defence and Space as a major player in secure communications and approached it with a clear business vision," says Fadi. "The company was very receptive to our approach and has ever since provided us with valuable support in penetrating the Jordanian market.

"Since penetrating the infrastructure market is difficult and requires long-term action, we chose to focus on handheld terminals," Fadi explains. "Our first action was to spread the equipment for trials, which were a huge success and brought us good feedback."

A seminar in Amman brought together potential customers and Airbus Defence and Space staff to see how the devices could benefit them. Orders quickly followed.

JETEE looks confidently into the future. "The Airbus Defence and Space brand has made our company better known in the Jordanian market and the company made us truly feel like a member of its global TETRA family. When both parties play transparently as a team, anything can be achieved!" says Fadi Darwish.

Kamal Abbassi & Sons Co. (JETEE) is a pioneering company in Life Safety Systems, Security Systems and Telecommunication. The company was established in 1981. After 33 years, JETEE is still keeping its high ranking in the Jordanian and Arabic markets. Since the start of JETEE, its policy has been to provide the market with the latest and newest technologies. Hence, JETEE is growing in a promising way to add value to the regional market.

Fadi Darwish, Sales & Business Development Director at JETEE.

ASTRID withstands ‘Hurricane Obama’

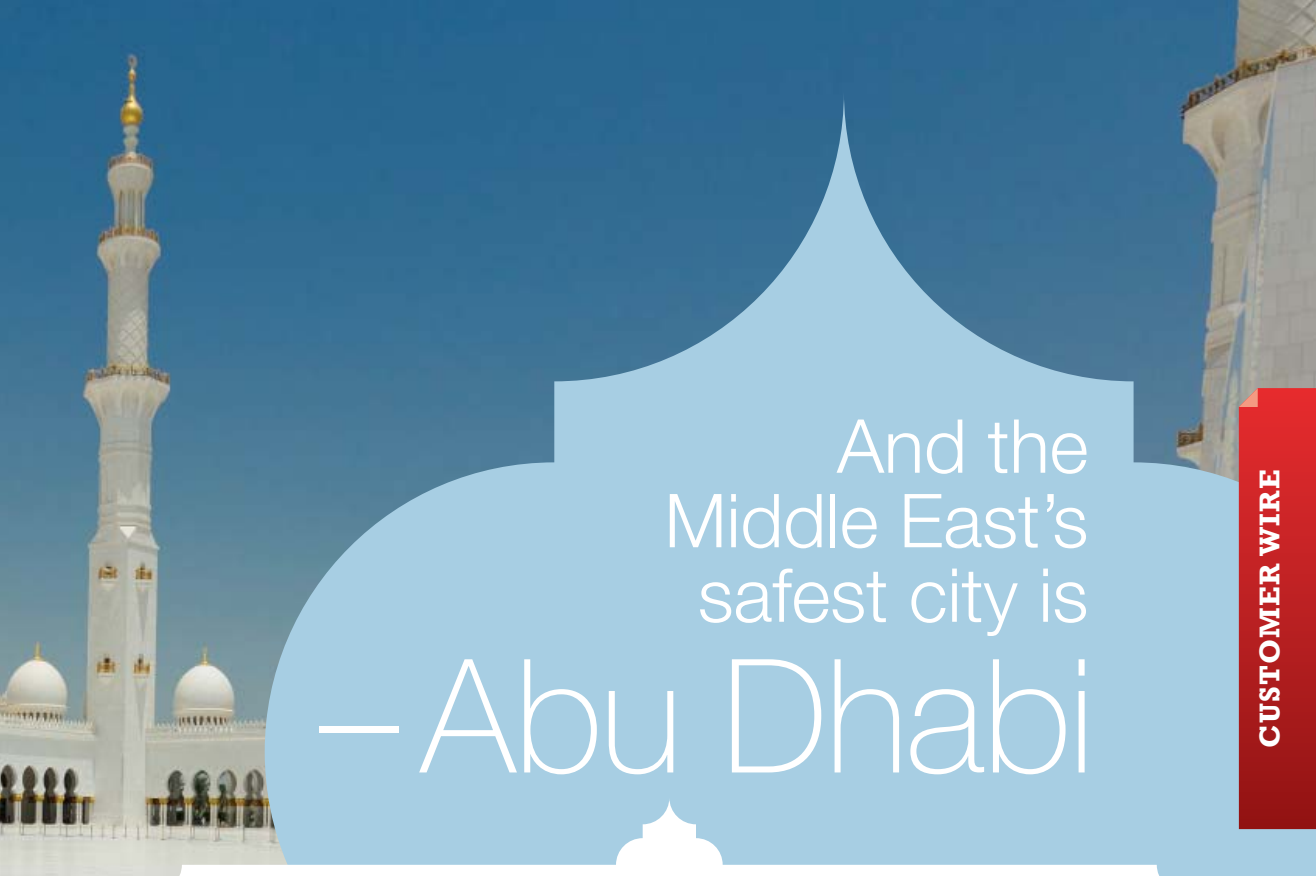
Although lasting less than 24 hours, the official visit of U.S. President Barack Obama was a large and intricate operation for the Belgian security services. Yet, thanks to the nationwide ASTRID network, everything went according to plan. ASTRID’s systems worked perfectly - despite much more radio traffic than normal, police and other emergency services communicated smoothly. In Brussels alone, 1,200 officers of the local and federal police were in action, while provincial and central government dispatching centres were also on full alert.

On March 25 and 26, around 24,000 ASTRID group calls were made in the Brussels area, a doubling of the normal radio traffic. The mast close to the hotel where Obama spent the night handled 716 minutes of communication per hour, while the mast at Brussels airport recorded up to 10 times more traffic than on a normal day. On 25 March during Obama's visit to the U.S. military cemetery, many calls were also handled between Wevelgem and Waregem. In this region, communications took from a few milliseconds to up to two seconds to establish due to the heavy load during peak hours.

Up to 10 times more traffic than on a normal day

An event of this magnitude requires good radio discipline. During Obama's visit, police and emergency services made clear agreements about the structure of communication, making the best use of communication talk groups.

The ASTRID radio network has shown it is capable of absorbing significant peaks in communications. ASTRID systematically monitors network traffic every day to detect potential problems in good time and allow them to be resolved. By doing so, the capacity will continue to meet the needs of radio users in the field.



And the Middle East's safest city is – Abu Dhabi

Named as the Middle East's safest city in the 2011 Mercer Quality of Living Index, Abu Dhabi's virtually crime-free environment and well organised emergency services are supported by Airbus Defence and Space.

A better police service

Abu Dhabi Police (ADP) recently accepted into service its new advanced Call-Processing solution for Public Safety. Supplied by Airbus Defence and Space, the system provides enhanced capabilities that will allow ADP to improve its services to the growing population of the UAE for many years to come. Under the ADP999 project, (inspired by the 999 emergency number used throughout the Middle East), ADP now has centralized control, flexible operator roles, seamless integration and increased capacity.

Paving the way for the future

In 2010, Cassidian (now Airbus Defence and Space), began working with its channel partner ESiS to promote its integrated approach to critical communications. This would address all ADP's long-term objectives for improved functionality and more streamlined operations. A competing legacy solution was no longer satisfying the police force's evolving needs and in 2012, ADP awarded the project to ESiS, with deployment beginning in 2013.

The vision – seamlessly integrated, networked, role-based next-generation control room

ADP was attracted to the Airbus Defence and Space solution for a number of reasons. These included a single login for both telephony and radio dispatch applications as well as seamless integration with ADP's TETRA radio network from Airbus Defence and Space. The fully redundant solution with no single point of failure has an open architecture that supports interfacing

to third party applications. The system also has the ability to redirect/overflow calls dynamically within the system architecture. This flexibility extends to creating and accessing different user layouts, with the capacity to evolve and expand the system to more than 200 operator positions. It will also be able to handle multimedia content in the future.

An integrated solution across six sites

The solution includes Integrated Dispatch System 9700 (IDS9700) for integrated call-processing and TETRA radio dispatching, as well as Aurora for statistical reports and performance analysis. These applications are all deployed using localized Arabic user interfaces and a customized location data interface adapted to the local telephone network.

The system supports 80 positions across six different sites in the U.A.E. and also integrates with the ADP's existing CAD and digital recording platforms. Airbus Defence and Space worked with its local channel partner to provide Project Management, installation, engineering and consultation services.

Jeroen De Witte, CTO at Cassidian Communications Inc., an Airbus Defence and Space company, says: "We're extremely pleased with the ADP999 project. It is a good start for IDS9700, which integrates call taking and dispatching and is widely deployed in North America.

"It shows how Middle East public safety can benefit from the reliability and performance achieved in the world's largest control room market. I expect Europe to take turns next, aiming to improve public safety service and driving down the associated operational costs."

Cell phones in public safety communications?

There is a better way

We often hear about confidential records being left on trains and in taxis, but one country's communications blunder led to confidential police records and data being sent straight to the phone of a civilian IT teacher. The police officers thought it would be a good idea to use WhatsApp messenger as a work tool for surveillance operations. The officer that set up their chat group mistyped one of the phone numbers to mistakenly include a civilian.

Luckily, the teacher had no interest in using the information for illegal purposes and quickly told the authorities of the mistake. Yet it still took more than 24 hours before the teacher stopped receiving sensitive case information, including criminal records, passport photos and communications between surveillance teams tailing suspects.

Commercial systems not secure enough

This begs some fundamental questions. Why were these officials using commercial services? And why can't public safety organisations simply use cell phones for their mission critical communications?

One of the reasons is that public safety officials cannot depend upon commercial systems that can be overloaded and unavailable. These systems are often the most unreliable during critical incidents, when they are simply overwhelmed by public demand. But the main reason to avoid commercial services comes from the need to keep information confidential.

In their daily work, public safety officials handle confiden-

Security is critical for professional users

tial information that should not become public, because it could put the officials in physical danger, jeopardize their operations or is legally deemed confidential. Commercial messaging services are not suitable for transmitting such information.

Public safety communication requirements

Public safety users need purpose-built communication systems because they have unique and demanding communications requirements that are fundamentally different from civilian users. They need dedicated channels and priority access that is available at all times to handle unexpected emergencies. They also require mission-critical one-to-many group capability, a feature not available in today's commercial cellular systems. Another priority is highly reliable, secure and redundant networks that can withstand natural disasters and other emergencies and offer the best possible coverage, with a minimum of dead zones.

Also vital is ruggedized equipment designed for quick response in emergencies.

A totally secure way with TETRA

The TETRA solution from Airbus Defence and Space meets these requirements, offering the convenience and data applications of a commercial system with the security and ruggedness of a professional mobile radio network. Short Data Service (SDS) messages can be delivered on the control channel, during speech and over dedicated data channels. Furthermore, the system allows a single message to be addressed to a group of devices, just like the WhatsApp commercial service. TETRA also offers the ability to share pictures.

The high security demanded by professional users is achieved by a government controlled ownership structure, complete encryption solutions, including authentication, air-interface encryption and end-to-end encryption, designed to meet even the most demanding confidentiality requirements. Authenti-

cation prevents unauthorized access to the network and allows the use of encryption functions to protect legitimate users.

With Airbus Defence and Space's Class 3 air-interface encryption, not only are the speech and data encrypted, but the subscriber numbers and control information are too. It's not even possible to monitor who is calling whom and where the subscribers are. The encryption mechanism is available for both trunked and direct mode operation. Authentication is mandatory and the encryption relies on dynamic keys.

End-to-end encryption complements air-interface encryption and operates between terminals, without any intervention by the infrastructure. Secrecy is fully under the control of the end users.

The system never decrypts end-to-end encrypted communication in the network. The message is carried as encrypted TETRA coding throughout. This level of security also requires that fixed terminals such as dispatching stations must be able to encrypt/decrypt communication if they want to participate in end-to-end encrypted calls.

Secure dispatching

The Airbus Defence and Space RCS9500 and DWSx dispatcher workstations are used for managing and dispatching field operations with end-to-end encryption. Supporting both end-to-end encrypted and clear mode voice communication, they automatically switch into the right communication mode depending on the other parties in the call.

The end-to-end encryption capability of the RCS90500 and DWSx offers even the most secretive operations and user groups the ability to use a dispatcher.

The RCS9500 and DWSx support the IDEA algorithm in end-to-end encryption by default, but some users may want to specify their own algorithm. Airbus Defence and Space offers flexible hardware and software interfaces to meet this need.

NIGHT VISION for the night shift

Working at night or in the darkness brings additional requirements for radio usage. All the information and icons shown on the radio display need to be clear and easily readable, but not too bright to disturb the user.

To improve user safety and the radio's usability when working in the dark, the Night Vision feature has become a standard on Airbus Defence and Space radios. When Night Vision is activated, the display is changed to a darker and less aggressive colour scheme, allowing better visibility in dark environments. The brightness of the display is optimised for better comfort for users' eyes.

Night Vision can be quickly and easily activated from the "Go to" menu or via a long press of a number key as a pre-programmed shortcut.

The Night Vision feature offers a major advantage to the user by allowing them to fine-tune the display to better suit dark environments and night shifts. Are you seeing the difference yet?

The truly slim and light TH1n is much more than a basic TETRA radio. It is also a perfect solution for covert use and paging. Furthermore, it can also function as a DMO repeater.

4-in-1 – that's TH1n

TH1n as a RADIO

TH1n is small in size, but big in performance. With its 1.8 W output power, IP65 protection class and very advanced software feature set, TH1n is a great communication tool for both heavy-duty users in the field as well as those wearing light uniforms or even business clothing. It is so easy to slip into a pocket or handbag, or to use with any of the smart carrying devices. TH1n is now available in 380-430 MHz and 800 MHz frequency bands.

TH1n as a COVERT

With special accessories, TH1n can be used very discreetly in covert operations. Unlike with traditional covert solutions, the TH1n user also has a fully featured radio available and ready to be taken into use. This is beneficial for users whose duties change from covert usage to normal radio communications - they don't need two separate units. TH1n meets both needs.

TH1n as a PAGER

TH1n can also be used as a pager, allowing additional resources to be alerted quickly and easily whenever needed. The new Callout feature brings new paging functionality to the TH1n, as well as other radio models from Airbus Defence and Space. With full Callout, the TH1n radio is an easy-to-use task management solution in the field, as the user can acknowledge and confirm a task status and finally report it as completed.

TH1n as a REPEATER

TH1n can operate as a DMO Repeater device (as Type 1A repeater) extending DMO coverage. The Repeater mode is activated through the radio menu or by a single long press of a functional key. When TH1n is used in repeater mode, individual and group calls and status messages are passed through to other radios. Repeater functionality is a license based, optional feature which is unique for each radio.

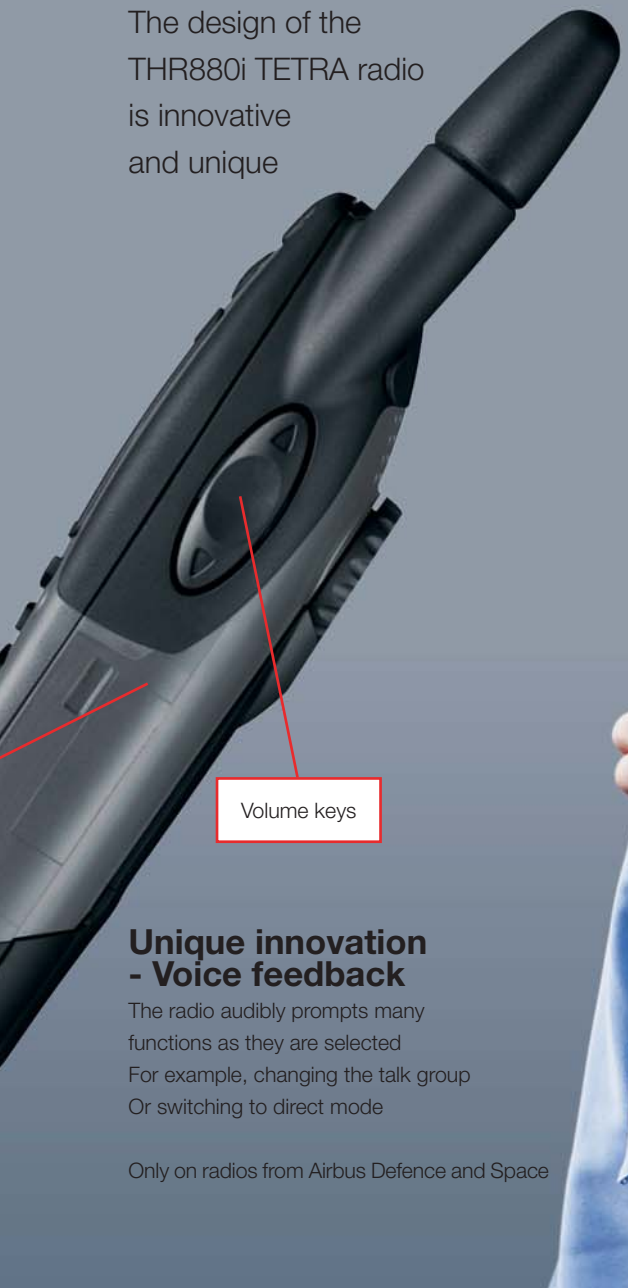
4 sides of


Radio with display and keypad
Phone calls
Messaging
Managing the radio
Red emergency key
Traditional PMR radio
Group communication
Group selector: Select a talk group by rotating the selector
Duty key
PTT
Fast menu key
3 sides to use without looking
HI / LO
3-D positioning
Coordinates:
N62°13'97.0"
E105°44'33.0"
Accuracy (m): <25.0
Save
Back

communications

More than one way to communicate

The design of the THR880i TETRA radio is innovative and unique



Unique innovation - Voice feedback

The radio audibly prompts many functions as they are selected
For example, changing the talk group
Or switching to direct mode

Only on radios from Airbus Defence and Space


CUSTOMER WIRE

Rakel equips Swedish Air Force for

digital take-off

Summer 2013 saw the Swedish Air Force's 30-year-old analogue radio system replaced by the Rakel national digital communications network throughout its airport network.

According to Peter Forslund, project manager for the roll out, the transition to digital makes communication between military airports much easier, as well as enabling closer co-operation between the Air Force and other agencies already on the Rakel network, such as the emergency services and the police.

Called Markradio Air Force, the new service is the result of extensive collaboration between a number of agencies and industries. It won out over several possible alternatives in a selection process that looked at both the technical capabilities and ownership models underpinning the systems. Rakel is the national crisis management radio system, which is owned by the Authority for Civil Contingencies, or MSB. The Markradio Air Force roll out was carried out jointly by the Armed Forces and Defence Procurement Administration.

Mr. Forslund says the Markradio Air Force project is unique within the Swedish Armed Forces because it is owned and operated by an external agency. However, he adds that the advanced system solution fulfils all the Air Force's requirements without any compromise in the terms of functionality or security.

"Previously, no collaboration between the various airports was possible via terrestrial radio," he says. "With the new system, it's also possible to achieve improved coordination with other key radio functions, such as positioning, status messages and priority between calls."

Furthermore, because the Rakel network already hosts services for a number of other public authorities and safety organisations throughout Sweden, establishing the Air Force's radio on the same infrastructure should make multi-agency co-operation easier in the future.

For the Air Force system, MSB and industry developed a system with a functional availability of 99.98%, in line with current aviation security requirements.

The roll out includes the deployment of around 3,000 hand- and vehicle-mounted radios.

This article was originally published at Försvarets forum, issue 6, September 2013.

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Erratum

An article in the previous Key Touch issue 1/2014, Rakel equips Swedish Air Force for digital take-off, page 36, was missing the original source, which is Försvarets forum, issue 6, September 2013. We apologize for the error and any inconvenience this may have caused. The error has been corrected in the digital version of the magazine.

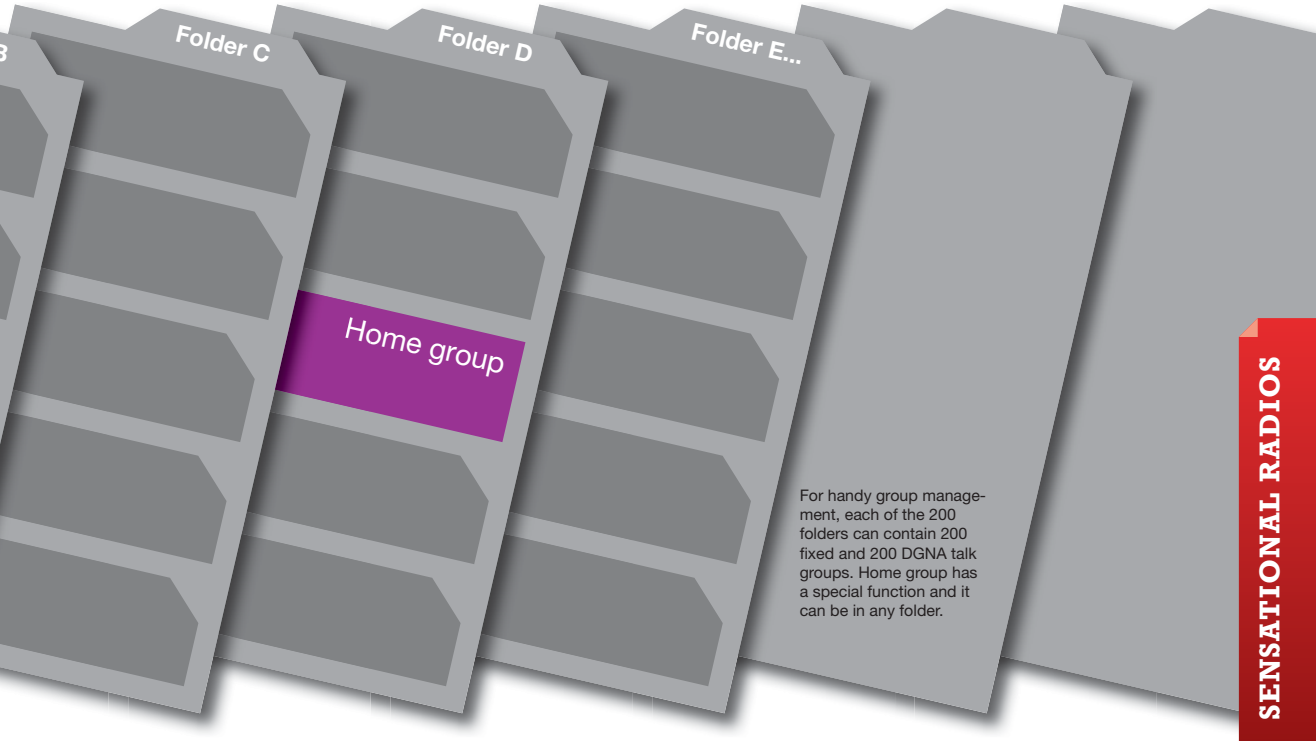
DID YOU KNOW…
… group

Groups are a very powerful way of bringing people together to work in a shared TETRA network, with each user organisation having its own unique talk groups in their radios. Shared talk groups also allow different organisations to communicate during major emergencies.

Since a radio can include 3,000 talk groups, a good way to manage and access them is vital. Talk groups can be organised into 200 talk group folders, with each folder containing 400 talk groups - 200 fixed talk groups and 200 DGNA groups. One talk group can be stored in several folders, allowing the most commonly used groups to appear in the most commonly needed folders.

Find folders easily

Groups can be divided into folders according to attributes such as geographical area, while folders can



For handy group management, each of the 200 folders can contain 200 fixed and 200 DGNA talk groups. Home group has a special function and it can be in any folder.

management

be easily activated and changed in the field when needed. Some users can be granted rights to access only one folder, while others can access them all.

Additionally, up to five talk group folders can be the user's own, to which they can add their own collections of talk groups.

Talk groups and talk group folders can also be accessed with a single press of arrow keys when the radio is in standby mode.

Talk groups to suit any need

The idea of a Home group is to have one talk group that is easy to access in any situation. It can exist in any folder and it can be selected regardless of the selected folder. By default, the Home group is always scanned when group calls and scanning are on, but the user can also exclude it from scanning. Even when a user selects another folder, the Home group remains the same.

Talk groups come in several different types. There are Background Groups for broadcast calls to several talk groups, allowing the most important information to get to all users and delivered simultaneously to many groups.

Then there is the receive only group, which means that the group is shown on the radio's group list but the user cannot initiate a call to it.

A Confirmed group call is also possible, in which the network informs a calling radio if some base stations in the group area are not available - the calling radio is alerted to restrictions but the call set-up continues normally.

Groups are the key to TETRA, making users' working lives easier, while making co-operation between organizations much more efficient and effective.

Get the **best network** for your operations

Choosing a digital radio network to suit the way you work may seem daunting, but the task can be broken down into five key requirements. It should not disrupt your operations, should be secure, bring new efficiencies, be supported by many suppliers and come from a vendor who can deliver the solution you need.

No disruption allowed

They say the simplest option is the best, but when it comes to communication systems, this may not be the best advice. The simplest communication system will not be very flexible, so people will have to adapt to it.

If you plan the adoption phase in enough detail in advance and if you choose a better, flexible system, your people should be able to continue their work more or less as usual during the transition period. A flexible system can ensure that you do not have to change your operational models.

It must be secure

Any violation of security may mean that your communications leak into the wrong hands, so getting a truly secure system is a must. It needs to provide five key features. It needs to offer confidentiality - are communications safe from eavesdropping? Integrity - can the users trust the communications? Authenticity - is it certain that only intended people can use the radio services? Non-repudiation - can the authenticity of communication be proven? Availability - will communications get through?

Make sure that the new system is flexible enough

Does it offer new efficiencies?

Once you've got the new system up and working, what's next? You should have an idea about which new efficiencies and improvements you can gain from the new system.

Make sure that the new system is flexible enough so you can introduce new, improved operational models when your people are ready. Significant efficiencies can be gained from choosing a single radio network for both voice and data, as people do not have to carry two different devices and training is faster and easier, too.

Applications give additional possibilities for improving operational efficiencies. For example, Automatic Vehicle/Person Location (AVL/APL) combined with status information are a powerful tool for better management of fleets.

Choose a proven technology

Radio users have many needs, and some of them may be very specific to your operations. It makes sense to choose a technology with suitable products readily available and whose suppliers adapt to your investment cycles and are committed to your needs over a long period of time. This ensures that your organisation gets the kind of radios they need.

In contrast to new technologies, in a proven, competitive

market, buyers can choose between several suppliers. They can select the supplier of radio network infrastructure to be different from the supplier of radio terminals. TETRA, for example, has such a market.

Can the vendor deliver?

After a long and careful research of user requirements and thorough evaluation of how the suppliers promise to meet these requirements, it comes to the final question: whom can we trust to deliver what we need?

The supplier may have indicated that their system will meet your requirements but you may end up with less than you wanted. Proven references from similar projects and examples of operational use can help you decide which supplier to trust to deliver what you need.

With its extensive range of TETRA solutions, added to its deep expertise and wide experience of PMR projects, Airbus Defence and Space can deliver a radio network that meets your needs.

Lines of communication

Airbus Defence and Space's TETRA radio communication systems help keep metros running smoothly worldwide, from long-established locations like Paris and Berlin to the rapidly expanding marketplaces of Asia and the Middle East. Designed to meet the needs of metro use, including driverless trains, these systems improve passenger safety and play a key role during emergency situations.

With China adding 1,700 kilometres of metro lines by 2015, a new market has emerged in a far more densely populated part of the world.

Addressing the challenge of scale, Tapio Mäkinen, Marketing Director, Operational Marketing, Airbus Defence and Space, says, "We are making one very reliable solution that's scalable and configurable." TETRA solutions developed by Airbus offer a robust network architecture and fault-tolerant platforms that ensure high availability without interruptions. Primarily used in the public safety market, implementing Airbus Defence and Space's TETRA system in transport makes radio communication across metro lines extremely efficient and reliable.

Serving the transport market for ten years

The first TETRA systems were implemented in Europe more than 10 years ago. In China, TETRA was just beginning to gain ground in the transportation market. Now, there are 80 mass transit rail lines for 25 cities planned for completion by 2015. Airbus Defence and Space has already provided TETRA systems for 25 other Chinese metro lines.

"Inside China, there are only two TETRA vendors in the metro market and Airbus Defence and Space is one of them," says Wei Rong, Head of APAC Technical Sales Support at

Airbus Defence and Space China. "Why? Because metro customers demand a company's transportation references in China, and Airbus Defence and Space has been serving this market for 10 years."

High-performance radio

Although many transit communication systems are based on TETRA, not all systems are identical. Airbus Defence and Space's TETRA system has several features that meet the specific needs of metros. For example, the location-based group call feature assembles members automatically as users come and go around a given area, so it is ideal for staff moving between different metro stations.

Wei Rong cites another benefit of Airbus Defence and Space TETRA system, especially relevant in markets like Asia and the Middle East where metro systems are funded and built one line at a time. "Our older-generation systems can still operate on the latest versions of our software, and multigenerational systems can be interconnected seamlessly," she underlines.

Based on its expertise in China, Airbus Defence and Space, along with its local Chinese application partner, recently won its newest metro case in Jaipur, India and has an eye on North America. Says Wei Rong: "There will be tougher competition from local companies and technologies. Currently, we are expanding our TETRA business in China, and we need to continually find commerce and solutions for the new market."

Connecting smart grids securely

Intelligent energy networks, so-called 'smart grids', combine communication and information technology. Smart grids can help ensure a reliable energy supply, control renewable energy sources and give consumers control of their consumption.

Smart grid communication needs to be secure, reliable, available and scalable. The communication network must ensure that data and control commands get through.

Commercial networks cannot provide the necessary security, reliability and availability. TETRA radio communication, on the other hand, is an excellent choice for secure smart grid communication.

The Claricor® 3 TETRA system, for example, can transmit control and monitoring information in a secure and reliable way. In addition, it can provide voice communications for effective mobile workforce management.

Voice is still the most efficient way to communicate with maintenance personnel. TETRA voice communication includes both group and one-to-one communication and offers applications to manage mobile workers.

The slimline TH1n TETRA radios are lightweight but robust and therefore ideal for maintenance personnel. They won the award of Best TETRA Enterprise Product in 2013.

TETRA BUILDING BLOCKS FOR SCADA

SUPERVISORY CONTROL AND DATA ACQUISITION (SCADA) of the electricity distribution network helps identify and recover from distribution network problems.

A typical SCADA system consists of control room applications and field units called RTUs (Remote Terminal Units). RTUs collect data from appliances and transmit commands to them.

TETRA is a proven and cost-effective communication solution for medium voltage (15kV - 20kV) network automation and supervision, providing proven security and high reliability. TETRA voice keeps field maintenance teams and control rooms in touch when commercial services fail.

TETRA data for SCADA

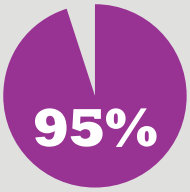
TETRA SDS (Short Data Service) messages are perfect for SCADA. SDS messages also support transmission of GPS information from TETRA radios. If you opt for a TETRA system from Airbus DS, you get maximum capacity which is limited only by the number of available TETRA carriers.

TETRA for SCADA control rooms

When you choose a TETRA system with an open Application Programming Interface (API), you ensure easy integration with SCADA control rooms. Redundancy can be enhanced with several API clients and even a second gateway.

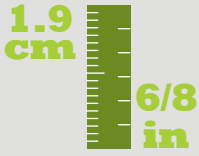
SCADA field units with TETRA

SCADA Remote Terminal Units (RTUs) are connected to the TETRA network with a TETRA data modem, which can be embedded in the RTU device cabinet.



SAFEcommand APP

Used by 95%
of UK fire brigades



TH1n RADIO

TH1n is really slim at only 19 mm thin

SAFE CITY

Singapore is extremely densely populated - 5 million people live in just 710 km²

CLARICOR® 3 SOFTWARE

Claricor 3's core switch uses telecom grade technology that connects 1.6 billion people worldwide

END-TO-END ENCRYPTION

Airbus DS TETRA never decrypts end-to-end encrypted communication in the network

OIL PIPELINES

About 10,000 km of oil pipeline is secured by Airbus DS TETRA radio solutions

VEHICLE COMMUNICATION

One police vehicle has about 40 different user interfaces

1,716,000,000,000 SDS MESSAGES

1,716 billion short data messages are sent over the VIRVE authority network every year

World's longest pipeline with TETRA

The world's longest oil pipeline runs for thousands of kilometers in Russia through some of the remotest regions. TETRA radio communication has proven to be a reliable and cost-effective way for pipeline operators to stay in touch.

Russia's Transneft operates one of the world's most extensive oil pipeline networks, stretching across Eastern Europe and Asia. Radio communications from Airbus Defence and Space are keeping company staff in touch, with TETRA radios offering data and voice communications, connecting colleagues out in the field with operators at stations positioned along the route.

An essential tool

Field staff use radios in their daily tasks, which involves checking the status of the oil pipelines and performing planned maintenance. Most calls are made between individuals within the field brigades, with group calls used only during emergencies. Dispatchers (group leaders) are always involved in these calls.

Of course, good coverage is essential and this is always checked with the communication department before operations commence. Reliability of the equipment is also very important when working in harsh environmental conditions.

Dynamic groups aid co-operation

When it comes to overall benefits, Transneft finds the spectral efficiency of TETRA very useful because it overcomes the challenges of a lack of available frequencies in some areas. Encrypted communication is also important to them. The dynamic group facilities of TETRA provide vital flexibility, as in certain operations, many organisations are involved at the same time.

The system has also allowed Transneft to save money. Following the implementation of the TETRA system, conducted by T-Helper, Transneft is able to operate with just one permanent maintenance engineer for every 400 km of pipeline instead of the six that would be needed conventionally.

Transneft is very pleased with the system: "We would definitely recommend TETRA system from Airbus Defence and Space to other oil companies and will continue to design new networks based on their solutions."

Key Touch
10 years ago

The big news in TETRA Touch 2/2004 was Sweden's decision to opt for a nationwide TETRA network for public safety authorities.

Issue 2/2004 also demonstrated the versatility of TETRA technology. Whether dedicated to a single organization or shared by many agencies, our company could already deliver a solution that provided uniform, country-wide communications.

Swedish safety

A Nordic consortium was to provide a nationwide TETRA radio communications network for public safety authorities in Sweden.

For ten years, the Swedish government, communities, regional bodies and safety and security authorities had discussed the need for a shared radio communications system for Swedish public safety organizations. The decision was made and the project, called RAKEL (Radiokommunikation för effektiv ledning, or Radio communication for efficient command), was born.

Endangered officer safety will be a thing of the past

"During the Göteborg meetings, radio communication systems suffered from very bad disturbances and during the incident at the Vasaplats on the evening of 15 June, the system was completely down. There were long periods of time during which the incident manager at the Vasaplats could not reach the 700 or so nearby police by radio". – from the Göteborg committee's report on Göteborg 2001.

The Rakel network is now well established across the country and today has around 40,000 subscribers representing around 250 organizations.

Shared networks

Feedback - Some questions and concerns were raised by potential users of shared networks:

"Is our information really safe?"
"In terms of rights, what can each subscriber do?"
"We want to create our own subscribers and groups – is this possible?"

Today, we know that sharing a TETRA network from Airbus Defence and Space has proven an excellent way for public safety organizations to gain many benefits while keeping costs to a minimum.

Firefighter Sami from Finland

Both in the US and Finland, handheld radios today play a key role in efficient fire and rescue communications - yet there are distinct differences in the two countries' approaches. This was one of the many observations made by a Finnish firefighter who crossed the Atlantic for a three-month work exchange.

Everybody has dreams – and sometimes they come true. Sami Huovila, a 36-year-old firefighter from Jyväskylä, a town of 135,000 inhabitants in Central Finland, had for years dreamed of a chance to pursue his profession in the USA. Thanks to an international work exchange programme, Sami had the opportunity to work from October to December 2013 as a firefighter at Jacksonville Fire and Rescue Department's Fire Station 21 in Jacksonville, Florida, a city with a population almost ten times that of Jyväskylä.

During his stay, Sami was to follow the local firefighters without actually taking part in any action, as the fire station could not put him at risk. Despite this restriction, the period was highly rewarding.

"What impressed me most in Jacksonville was the strong feeling of brotherhood among the firefighters. They are all extremely proud of their profession and do a lot of educational and charitable work in the local com-

Photo © Sami Huovila

Fire communications, brotherhood and blogging in the US

munity," Sami says. "For example, when a little boy was badly injured and wrecked his bike in a car accident, the firefighters collected money among themselves and bought him a new bike. This kind of work makes big headlines and has enormous PR value."

#1 tool: handheld radio

Sami specializes in rope rescues and has worked as a firefighter and paramedic for 12 years. Of the many tools in use, the handheld radio is without question Number One. The Jyväskylä Fire Department uses the THR880i radios in the Finnish nationwide TETRA network VIRVE.

"I carry the handheld radio with me all the time while on duty. Alarms come to it as texts. I mostly use only one talk group, as this is enough to keep contact with my foreman and co-workers," Sami explains. "Sometimes I use the direct mode. While on duty in an ambulance, I can send status messages to keep in contact with the local emergency response centre."

In Florida, firefighters also carry handheld radios with them while on duty. However, Sami noticed some differences. "In Jacksonville, only voice communication is being used, not messaging. Whereas in Finland, we use mainly text and status messages and have minimized the use of speech to make the work of the emergency response centre easier."

Reliability above all

In addition to fighting fires, in a single shift, a firefighter may have to deal with a traffic accident, remove hazardous materials or cope with individuals behaving violently. The handheld radio just has to work without failure - everywhere. "Reliability is of utmost importance. It is vital to be able to call for help above all for the people we are protecting. Secure communications improve their safety and allows them to get the right kind of medical treatment fast," Sami points out.

In Jyväskylä, firefighters participate in communication training once a year. The user must know his device and how to use it. For a firefighter in action "the simpler, the radio is, the better" since he has his hands full with work.

A blogging firefighter

According to Sami Huovila, one of the biggest differences between the colleagues in the US and Finland is how much the local community appreciates their work and how highly regarded their profession is. "When guys in Florida go to a store, people come to chat and shake hands, or even ask for an autograph. This is something that we definitively don't have in Finland."

Because of his stay in Florida, Sami has become quite a media personality. He has been interviewed by local and national Finnish newspapers and radio channels. It is not often that a Finnish firefighter goes abroad to work, let alone writes a blog about his experiences there, as well as about other subjects related to firefighting. Even though the visit is over, he continues to blog in Finnish on http://palomiessami.blogspot.fi


LIEUTENANT
121

Alerting just got easier

Send **faster** and **better** alerts to your regular on-call crew and volunteers

FASTER Send a call-out to everyone with just one click

FULLER – Regular crew get full call-out on their standard TETRA radio

or

SIMPLER – Volunteers get alerted on their P8GR active pager

BETTER A map shows the situation in real time.