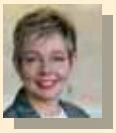

key touch®
customer magazine
1/2014
New names, new data
Making ideas happen
Paging enters a new era
Duty calls

WHO'S IN THIS ISSUE?

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

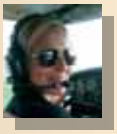
PETRA VAKIALA enjoys researching and writing stories for Key Touch - there are always interesting new topics to dig into and while digging one learns so much! In addition to writing stories, Petra is into horse riding, downhill skiing and interior design. *@petravakiala*



TIINA SAARISTO is Editor-in-Chief for Key Touch and has led the team of editors and contributors since 2003. In addition to Key Touch stories, Tiina is into quilting, Nordic walking and reading mystery stories. *@tiinasaaristo*

SATU LAMBERG sees the world around us changing all the time. People are becoming more technology oriented both in their professional and private lives. Against this backdrop, Satu is proud to be a member of the TETRA team to provide secure and safe communication to global users.

TUOMAS KORPILAHTI promotes Emergency Response Solutions and Smart Grids and contributes a variety of articles for Key Touch in the areas of new products, data and applications. When not working, Tuomas is busy completing his new house and learning about interior design.



ANKE STURTZEL In her role as a press officer for Airbus Defence and Space, Anke is filled with enthusiasm for worldwide professional mobile radio communication solutions 'made by Airbus Defence and Space'. With more than 15 years' experience at the Airbus Group, she continues to be inspired by the civil aviation sector and the latest technology involved.

TAPIO MÄKINEN has the mission to create marketing and photographic contents for the security of all. He has undertaken photoshoots for Key Touch magazine and Airbus Defence and Space to capture events, products, sports, professionals at work, city views and critical infrastructure. *@tapiomobile*

Key Touch 1/2014 - February 2014

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AIRBUS DEFENCE & SPACE

New names, new data for the New Year

WELCOME to the first issue of Key Touch for 2014. The year has begun at a furious pace for us here at Airbus Defence and Space. First, I am writing to you as the new Senior Vice President Secure Land Communications, responsible for managing the Secure Communications Programme in the newly created CIS. Business (Communications, Intelligence and Security) of Airbus Defence and Space. My name is Nicole Lecca and before taking on my exciting new role on 1st February, I was CEO at an Airbus Subsidiary, in the field of PLM (Product Lifecycle Management).

Another major change for us is our new name – with the Cassidian brand being replaced by Airbus Defence and Space, part of Airbus Group. Having the combined force of Airbus Military, Astrium and Cassidian, we can offer you an even more comprehensive and competitive portfolio of solutions.

Rest assured that with these changes, the company remains committed to providing highly capable and secure communications solutions and Airbus CEO Tom Enders emphasizes this in our article on page 9.

Perhaps one of the biggest changes we will witness in the PMR industry is the adoption of broadband data services. So it's no surprise that several articles in this issue focus on the topic. On page 30, for example, we report how the German Armed Forces now have the ability to use TETRA voice and LTE broadband data on the same system, with mobile base stations that can move with the troops. Trials featured in this magazine show how commercial broadband and PMR can work together.

Meanwhile, paging is making a comeback and our new P8GR active TETRA pager (page 12) is gaining interest from organisations keen to call in their volunteers quickly and cost-effectively.

PMR networks do not often make mainstream media headlines, but they were a great help recently in events involving two great statesmen, Barack Obama and Nelson Mandela – one a state visit to Sweden, the other, a funeral service attended by many dignitaries from around the world. Our articles (pages 10 and 37) show how networks provided by us helped things go smoothly.

It is a great honour and a great pleasure to join the world of secure communications! I look forward to our continuing cooperation in 2014.

Nicole Lecca
Senior Vice President
Secure Land Communications

Contents

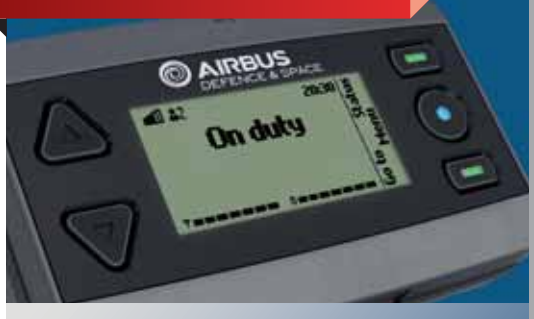
IN TOUCH

AIRBUS DEFENCE & SPACE

7 **A new name in secure communications**

Airbus Defence and Space replaces the Cassidian brand. What has not changed is the commitment to provide secure and effective communications solutions for the PMR market.

NEW SOLUTIONS



12 **Paging enters a new era**

Pagers were once a popular alerting device. The P8GR active TETRA pager brings paging to a new era.

PICTURE THIS

34 Dissolving borders

A pioneering TETRA project aims to enable authority radio communication across country borders, for better and closer co-operation.

CUSTOMER WIRE

20 Keeping the wheels turning

Virve provides Helsinki's regional transport authority with robust communications even under exceptional circumstances.

One mission, one team, one direction.

Airbus Military, Astrium and Cassidian join
forces for the success of your critical missions.
www.airbusdefenceandspace.com

AIRBUS
DEFENCE & SPACE

Airbus Defence and Space – a new name in secure communications

In January, Airbus Defence and Space replaced the existing Cassidian brand. What has not changed is the commitment to provide highly secure and effective communications solutions for the PMR market.

Cassidian entered a new era in January 2014 when it joined forces with Airbus Military and Astrium to form Airbus Defence and Space, one of the three Divisions of Airbus Group. The Division strengthens the individual businesses, generating some

€ 14 billion in annual sales and with a workforce of around 40,000 people.

Professional Mobile Radio (PMR) will certainly continue to be a core activity of the Airbus Defence and Space Division, which is the largest PMR vendor in Europe. In the new setup, in fact, we will be able to compete more efficiently on the global stage. Besides its key commercial aerospace activities, Airbus Group is proud to be one of the leading space, defence and security players worldwide.

Tom Enders, Chief Executive Officer of Airbus Group

Closer to customers

Tom Enders, Chief Executive Officer of Airbus Group, underlined the advantages of a closer association with the well-respected Airbus name: "For many years, Airbus has been a globally renowned synonym for technology breakthrough as well as aeronautic passion and pride. Joining forces under the strong Airbus brand gives all our operations and employees the thrust and lift to capture global markets."

The formation of Airbus Defence and Space provides a bigger 'footprint' worldwide, allowing the company to get closer to its customers.

It also allows Airbus Defence and Space to offer a more competitive and even more comprehensive portfolio of solutions. Combining solutions from the spheres of military hardware, space systems and communications produces a large, mutually supportive portfolio. This will help customers seeking to integrate their operations across these domains to improve their effectiveness and efficiency. These synergies between solutions from different business segments of the Division are also the most effective way to provide secure communications to meet the evolving needs of users.

Security remains top priority

Of course, security is a top priority for our customers. This means it remains one of our major priorities. Secure PMR solutions have been a major market for Cassidian and they will remain so for Airbus Defence and Space, which has prioritised cyber security.

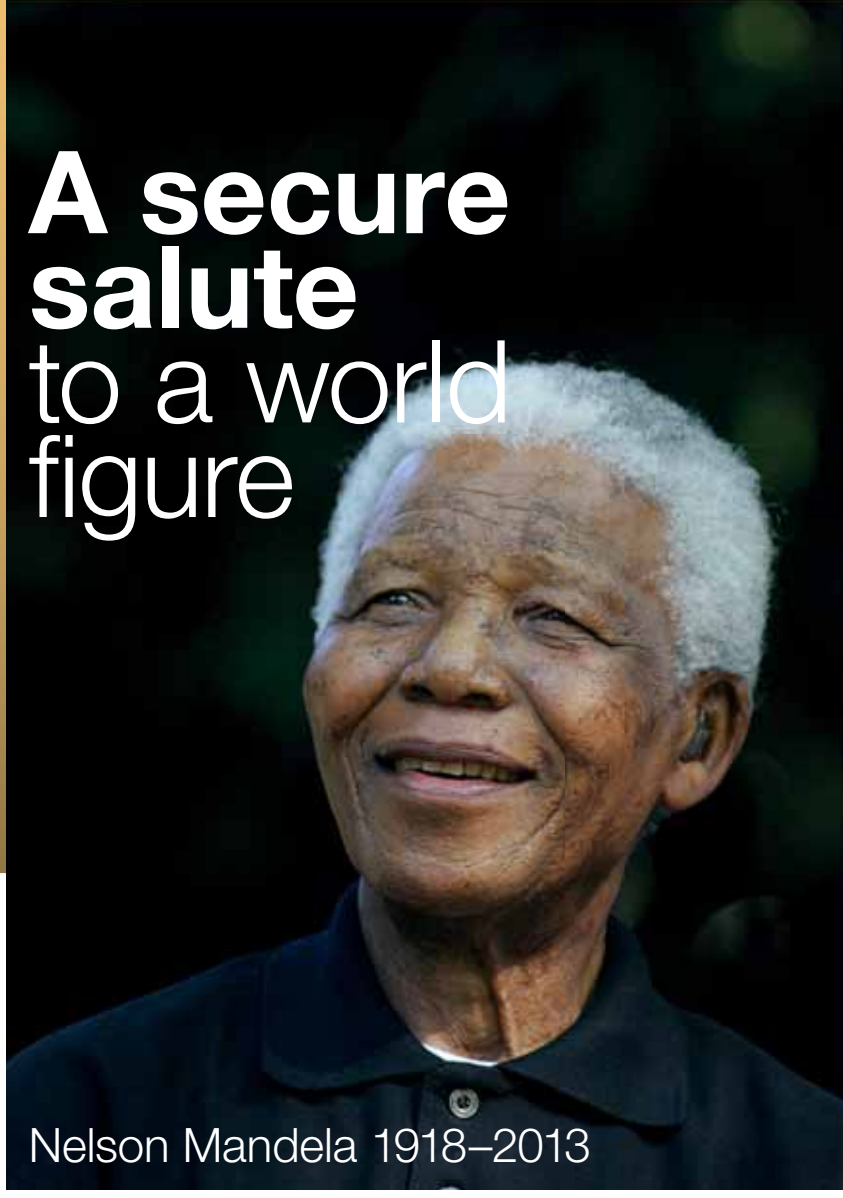
There are three key aspects of protecting against cyber-attacks: behaviour, training and awareness. Airbus Defence and Space is determined to make no compromise on safety and security. This determination is not limited to the IT systems the Divisions make use of on a daily basis, but is also applied to all its own assets and solutions. As well as basing its own operations and processes on the three key foundations – behaviour, training and awareness – Airbus Defence and Space will adopt these principles in bringing secure solutions to its PMR customers.

Airbus Defence and Space will help customers deal with the full range of cyber security challenges. This also includes training to raise awareness and improving 'cyber behaviour', which is another vital aspect of making a company 'cyber safe'.

Airbus Group's goal is to strengthen its commitment towards its space, defence and security customers. The company is committed to remaining a trusted and reliable partner of choice. The consolidation of Airbus Military, Astrium and Cassidian into Airbus Defence and Space is a prerequisite for enhanced competitiveness, profitability and future growth. It will enhance the company's ability to produce new, innovative solutions, to expand in new markets and to enlarge the economies of scale to customers across the world.

A secure salute to a world figure

The eyes of the world were on South Africa last December as one of the world's most respected statesmen, Nelson Mandela, was laid to rest. Airbus Defence and Space was proud to contribute through its TETRA network used by the police to provide security for the event.



Nelson Mandela was one of the world's most revered statesmen, who as the first black President of South Africa, led the country towards a multi-racial democracy. Following his release from prison in 1990, his election as president led to the granting of voting rights to all South Africans. Mandela also worked for peace in other areas, being awarded the Nobel Peace Prize in 1993.

He became a hero to people everywhere and was respected for his courage and wisdom in bringing people together. His death at his home on 5th December 2013 was followed by a period of lying in state, after which he was laid to rest on 15th December in Qunu, the village where he grew up.

The world gathers

Several thousand gathered in Qunu, including veterans of the military wing of the African National Congress, as well as United States Ambassador Patrick Gaspard and other foreign envoys. The UK's Prince Charles was in attendance, as was Monaco's Prince Albert II.

Many dignitaries also attended the memorial service in Port Elizabeth, as world leaders including Barack Obama and David Cameron paid their respects.

Securing the dignitaries

With such high profile visitors, security was paramount, as was the need for excellent communications to ensure both events ran smoothly. The Airbus Defence and Space SAPS (South African Police Services) Eastern Cape

The funeral procession carrying the remains of former South African President Nelson Mandela proceeds to Mandela's hometown and burial site in Qunu, South Africa, Saturday Dec. 14, 2013.

TETRA radio network was used to cover the events as well as supporting airport security in Port Elizabeth and East London.

The team and their local partners Saab Grintek and Integcomm reprogrammed and distributed 3300 handheld terminals, including 2500 brand new THR9s bought specifically for the event.

Radio dispatchers were installed in the Command and Control centers, while radio coverage in the Qunu area was enhanced. Temporary transmission lines and microwave links were also installed.

SAPS officials stated that they were extremely satisfied with the TETRA network from Airbus Defence and Space. They described the voice quality and PTT (push to talk) response time as excellent in comparison to other systems. The network, which was monitored in real time tests, proofed its 100% availability allowing individual and group calls at any time and any location in the defined region.

PAGING enters a new era

Pagers were once a popular alerting device. Now with TETRA, they are being given a new lease of life.

Paging is seeing a comeback, with TETRA networks offering more advanced features and solutions. For current users, this means valuable new tools and ways to handle the variety of tasks they need to perform in their daily operations. Meanwhile, a good paging capability can attract new users to existing networks. To serve all these customer needs, Airbus Defence and Space is developing a modern active pager, P8GR, which will be available in the end of 2014.

Before an incident occurs, a dispatcher will know the resources he has available because of status messages. When an incident does happen and the dispatcher needs to alert more people to attend the scene, it is easy to pass the critical information to officers on duty via the P8GR device. Messages can show the priority class of the alert, its location and a short description of the situation. The PG8R's large display can show all the critical information that users need, so they can prepare immediately for the task.

The user must accept or reject the alert with a simple key press before an automated timer runs out. Once the user has accepted the task, the dispatcher can send more detailed information on the mission as a text message.

If the alert is not accepted in time, the system may decide that the user has rejected the alert. This ensures the dispatcher knows instantly which resources are available for call out and if more resources need to be alerted.

Light but rugged

The P8GR is small and light, weighing in at only 145 grams. It features a compact internal antenna, making it easy to carry in a pocket or on a belt, while an external antenna in the home station is provided for even better indoor coverage.

The radio is rugged and resistant to the ingress of dust and water, protected to IP54. It is also shock proof, being able to withstand a drop of up to 1.5 m. The standard battery keeps the pager powered for up to 50 hours in stand-by, while the heavy-duty battery can increase this time up to 100 hours.

To charge the standard battery to full capacity takes only 2–3 hours, while the smart home station for the P8GR keeps the pager fully charged and ready to go.

Perfect solution

In countries such as Germany, where the majority of fire brigades rely on volunteer fire fighters, paging with a simple call-out is a perfect solution. Volunteers may be drawn from many different professions, but they each have their own specified task within the fire brigade.

Using a paging feature means these part-time volunteers don't need access to the talk groups used for voice communication.

Operators and dispatchers can also benefit from the advanced filtering features available in paging. Each user can have a specified role, such as a chemical expert, for example. The expert needs only be alerted if chemicals are involved in a particular incident. This function can be automated so that in an emergency, when every second counts, the dispatcher can simply send a group addressed alert and the pagers will handle the filtering according to their configuration.

It is also easy to keep P8GR software updated and properly configured by connecting the device to a standard home PC. The updates are performed over an IP network that provides connection to the Taqto® Smart radio management tool. This is particularly useful when the P8GR users are volunteers who do not visit the fire station every day or even every week.

To discover more about this forthcoming product, take a peek at www.p8gr.com.

Your radio speaks your language

Multi-lingual TETRA radios from Airbus Defence and Space will understand you – and you can understand them.

Original word art: M. Adiputra, Wikimedia Commons

Language is the key issue in all communications, especially in critical situations where fast actions and decisions are needed. Therefore, it is essential that your radio supports your language. TETRA radios from Airbus Defence and Space even speak your language.

Voice Feedback is a unique feature available only in TETRA radios from Airbus Defence and Space. It means that the radio actually talks to you, giving you clear guidance.

The voice feedback language is the same as the selected User Interface language on the radio. Whether you speak Arabic, Bulgarian, Chinese, English, Finnish or Korean, or something else, your radio speaks the same language as you – how cool is that?

TH1n, TxR880i-series and THR9-series radio users can now choose from 29 languages.

When you change a talk group, you can hear the Voice Feedback confirm your selection. With the Fast menu key on the side of the radio, you can quickly and easily access the most commonly used functions preprogrammed into your radio. If you switch between network and direct mode, activate or de-activate scanning or transmission barring or change a profile, your radio clearly tells what you just selected, so you don't need to read it on the display.

Displays in your own language

The user interface display text is also in your own language so you can read vital information quickly and easily. For easy typing of text messages or inserting other written information, such as phone book entries or name waypoints, the key pad needs to show the characters of your language, whether Arabic, Greek, Macedonian, Korean or other character set.

You can of course write in any language, but to use the predictive T9 text input, you need to select the writing language as well. T9 helps you to type more quickly by predicting the words from the internal dictionary. T9 is available in many of the offered languages.

Your everyday work is more intuitive and logical when your radio offers you the language settings you need for reading and writing, seeing and hearing.

More reliable – more discreet

Key Touch looks at some innovative accessories that make using the TH1n compact TETRA radio more reliable and more discreet.

Fast charging gets you back on the street

Officers are only effective when out serving the public, so it's vital their technology helps keep them there.

This is just what the new desktop charger for the TH1n radio does. You can charge your radio and one battery simultaneously. In only three hours, you are back in action with full power.

The unit's battery slot is designed to charge a standard battery (BLN-10) or a high capacity (BLN-11). A LED on the side shows the battery is charging, while the TH1n displays its own charging status on its screen.

A six-slot charger is also available, allowing up to six BLN-10 or BLN-11 batteries to be charged. Arriving back from a mission, simply exchange your battery with the one on the charger and you are good to go.

For those who prefer to charge at home, a smaller two-slot charger will also be available.

For those who prefer to charge at home, a **smaller two-slot charger** will also be available.

Go covert with TH1n

The TH1n is a slim and light radio, and it can easily be hidden in various items of clothing. A complete covert outfit has been developed, and you can use either the full radio UI or operate the radio remotely.

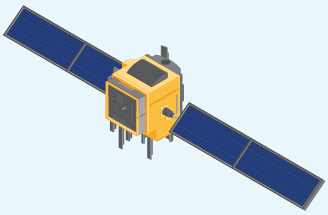
Want a full covert communications outfit? Take:

- TH1n (which you can also use as a standard TETRA radio)
- Remote Control Unit (RCU) for one-handed access to all the functions
  - press to talk (PTT), change talk group, switch from DMO to TMO, change audio volume, send short tone signals, switch the radio on and off.

And you can have wireless remote control to the RCU for two of the most important functions for covert operations: PTT and Tone. Tone sends accurate signals to other officers, useful when an officer does not want to or is unable to talk.

- Audio system: neck loop or an inductor lead, both with integrated microphones. In-ear earpieces so you can hear discreetly. Or opt for a standard smartphone kit instead of complex covert audio.
- Adaptor lead to interface the radio, RCU and audio.
- You may want to use either a dipole antenna, or a flexible ¼ wave antenna instead of the standard one.

DID YOU KNOW...
TH1n delivers best ever tracking



Did you know that the TH1n TETRA radio's built-in GPS receiver boasts an advanced Assisted GPS (A-GPS) chipset? This new type of chip can improve startup performance, with better positioning speed and accuracy as well as better time-to-first-fix (TTFF) to satellites.

The new GPS chip is equipped with an internal memory and a power saving mode. The sensitivity of the new receiver is -162 dBm, easily beating the old chip's score of -152 dBm. This means it can provide GPS based location information even when reception conditions are poor, such as in forested areas, among tall buildings and also sometimes indoors.

It also delivers accuracy of just 2.5 metres instead of the previous 5 metres. Saving time is another great advantage, since the TTFF under open skies is less than 30 seconds compared to 40-60 seconds previously.

The benefits of the new chip are so great that Airbus Defence and Space is also implementing it in the THR9i and TMR880i.

TH1n – light-weight but tough

Light weight and the good looks of an office phone? Yes, but the TH1n also offers the toughness required on patrol

The TH1n is something of a revolution in the market, with its size and light weight being well received across user segments. But the TH1n has been designed for PMR use in demanding working conditions.

Extreme temperatures? No problem

Tests show that the TH1n continues to operate at temperatures as low as -30° Celsius and as high as 70° Celsius.

Other grueling tests include a free-drop test from 1.5 metres.

Water and dust? No problem

Like all TETRA radios from Airbus DS, the TH1n has undergone extensive robustness and strength testing, and it has an IP 65 classification.

- IP for Ingress Protection
- The first digit 6 for resistance to dust: The TH1n is completely dustproof.
- The second digit 5 for water resistance: The TH1n will resist low-pressure water jets.

The conclusion:

TH1n can be trusted wherever and whatever happens. See how TH1n has been tested: vimeo.com/86011616

This year will see TETRA radios from Airbus Defence and Space expanding to new frequency areas. Asia and the Middle East will see new variants of the THR9i and THR9 Ex hand-held radios and TMR880i mobile radio, and the popular slimline TH1n TETRA radio becomes available in 800 MHz.

New frequencies make latest features more global

More features available in China

In China, the THR9i will offer a wider frequency band from 350 up to 380 MHz. The THR9i has more features and functions, including Lifeguard, the advanced man down solution. Its smart accessory interface allows the use of versatile accessories, even those with voice and data in the same device, such as speaker and microphone with camera/bar code reader and 3-in-1 multi handsets. Airbus DS is the only vendor offering radios that can handle simultaneous data and voice with hand portable accessories.

The TMR880i is the first mobile radio for this new frequency band and is receiving a warm welcome from local user groups. Now, the THR9i hand-portable and the TMR880i mobile radio make a good working pair in this frequency.

Reducing explosion risk

The THR9i, THR9 Ex and TMR880i radios will also soon be available for the totally new frequency band of 330-360 MHz, which will see its first use in the Kingdom of Saudi Arabia (KSA). Airbus distributor DDIT in KSA is excited to start selling this new product. The intrinsically safe THR9 Ex for explosion-prone environments is extremely important for such an oil-rich country. The THR9i and THR9 Ex have identical features and functions and a very clear and sharp display. In addition to in-vehicle deployment, the TMR880i can also be used in an office. These three models offer a competitive product portfolio for this new frequency range.

Pocket-sized power

The very popular pocket-sized TH1n radio is expanding its success to the 800 MHz band which is widely used in China and other Asian countries, in the United States and in Central and Latin America. TH1n is the thinnest TETRA radio in the world. See videos about TH1n on www.th1n.com.

SDS Centre

– bridging the gap to GSM texts

As TETRA evolves, it is being adopted by many more people beyond its core of professional users. Many of these are accustomed to texting using GSM, so how can TETRA make these users feel at home? We look at how the SDS Centre from Airbus Defence and Space can bridge the gap, particularly for Claricor®.

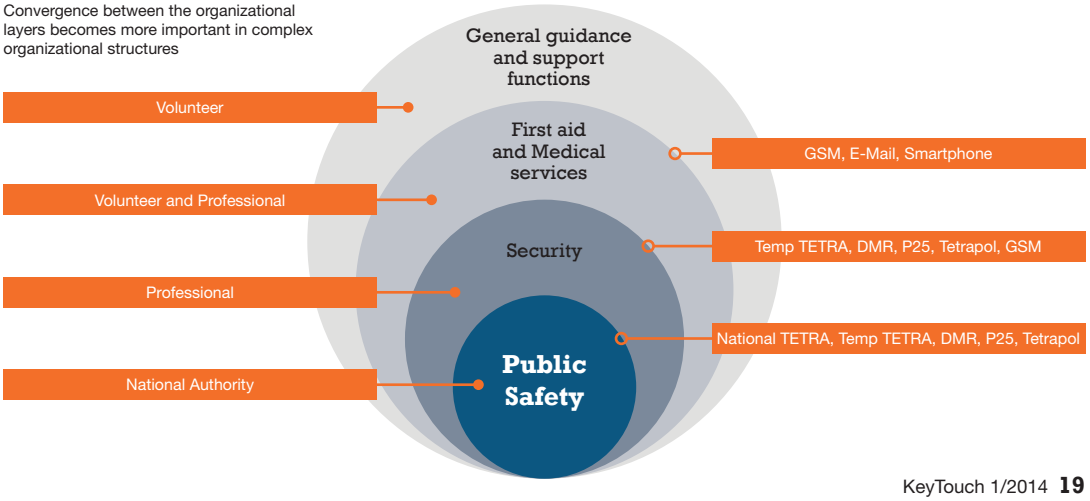
Whether you call it SDS or SMS or Text Messaging, it is one of the most successful messaging media of all time. SDS, or Short Data Service, is a very powerful way of sending messages in TETRA networks. Yet there are some differences to the way these are handled compared to the familiar SMS employed by GSM.

Probably the most important is what happens when the recipient is unavailable. We are used to the message being stored until the recipient is back on-line, yet this is not normal in standard TETRA. To ensure secure delivery, the SDS Centre from Airbus has a Store and Forward functionality, storing the message until the recipient can pick it up. Storage time can be adjusted to meet the needs of the user organisation. A very simple and trivial functionality, but, in some cases, assured delivery of message content counts for more than speed of delivery.

Where TETRA and GSM meet

Interoperability between network technologies such as TETRA and GSM becomes particularly important when temporary organisations are created to handle special events. These are made up of a core of professionals trained to use TETRA, supported by various sub-organisations, either professional or voluntary.

These organisations need a common way of keeping members up-to-date and, even though the whole organisation may not have access to TETRA terminals and data, this interaction can be achieved through SDS-SMS interoperability. SDS-email is another option for delivering important information.



Virve helps Helsinki keep the wheels turning

The start of the year saw the regional transport organisation around Helsinki join Virve, the Finnish authority network. Not only will the switch to digital radio improve internal communications, but it will also enable closer co-operation with other Virve users, such as the police and rescue services.

More than seven million public transport trips take place each per day in and around Helsinki, across a transport network run by the regional transport authority, HSL. "The starting point for the region's development is to enable the movement of people in all circumstances. Just getting the bus to the stop on time requires a well-functioning transport system. That's why we need extremely good co-operation between HSL, transport operators and the authorities," says Kai Kalmari, planning and safety co-ordinator for HSL.

Mr. Kalmari stresses that the system needs to keep running reliably during day-to-day operations, as well as being robust enough to keep going under exceptional circumstances. "The aim is to keep the wheels turning every day," he says.

Confident communications

HSL previously used mobile phones for communications. However, the phone network can quickly become congested during major public events or emergencies, which is exactly when transport workers, like other public services, need communications they can rely on.

In contrast, Virve offers the security of a separate, dedicated public authority network. It relies

on TETRA digital radio to offer extremely robust communications, even under exceptional circumstances.

Rapid response

Timo Vahde is a traffic inspector for HSL and he highlights how quickly a problem in one part of the transport network can build up into a bigger issue: "If a public transport defect cannot be solved, other traffic in the area gets paralysed. We have to be reachable by the police and rescue services reliably at all times."

Virve is therefore the natural choice for HSL, with radio users now including traffic inspectors, disorder inspectors and the managers of ticket inspectors.

The Virve network was opened in 2002 and already counts a range of agencies among its users, including the police, fire departments, health care, border patrols, customs and military police. Each user organisation enjoys its own virtual private network on the shared infrastructure, which also allows inter-agency communication and co-operation during joint operations.

This article is based on a story from Virve-magazine, issue 3/2013. Author Jarno Salovuori.

Finnish Airbus Defence and Space sites go green


Helsinki site

The environmental efforts of Airbus Defence and Space in Finland have been recognised by the award of an international environmental certificate to its Helsinki and Jyväskylä sites.

The ISO14001:2004 Environment Management System Certificate recognises that Airbus in Finland has set up an effective environmental management system, proving that the company's environmental impact is being measured and improved.


Jyväskylä site

Using ISO14001 helps reduce the amount and cost of waste management, cut the use of energy and materials, reduce distribution costs and show commitment to the environment to regulators, customers and the public. Governmental agencies require this certificate when requesting proposals from suppliers, with Airbus in turn requiring it from its own subcontractors.

Among the environmental goals and objectives of Airbus Defence and Space are to reduce energy use in its offices by 10% over five years, reduce the amount of printed paper by 5% a year and recycle more waste. Other initiatives include making greater use of teleconferencing rather than flying to meetings and adopting a policy of favouring low emission cars when leasing vehicles.

3×3+3

ways to best serve rail communications

Despite their long pedigree, railways and metros remain a modern way to travel. Convenient and safe, rail transport is used by billions of people every day. Radio communication is not just an important tool for these transport networks, but a vital service that railway and metro companies need to fulfill the high expectations of their customers.

3 VITAL NEEDS

1 **Keeping in touch.** Drivers are on the move and change cells frequently. They may work on a different train every day and even switch trains during a shift.

2 **Excellent coverage.** For metros, radio coverage is needed in tunnels, which limit the propagation of radio waves.

3 **Reliable contact.** Whether trains run on the ground or under it (or both), public safety demands instant, reliable, two-way communication between drivers and dispatchers, stations and security personnel.

This is how TETRA systems from Airbus Defence and Space can meet all these needs.

3 WAYS TO MEET EACH NEED

1 Keeping in touch

1 **Seamless call handovers** are a must. The system and the radio terminal both need to use Type 1 Handover, ensuring connections continue unbroken, even when users move between cells.

2 When the driver of a particular train needs to be reached, it is important that **either the train number or the train line number can be used.** It is also essential to reach the driver of the train even if the person changes as people change shifts.

3 **Role-based numbering** ensures that the correct driver can be reached using the train/line number even when the driver uses a handheld radio.

2 Excellent coverage

1 When building radio coverage, the trick is to **balance the uplink** - traffic from a radio terminal to the base station - **and downlink** - from a base station to the radio terminal. The uplink is far more critical, so a base station should have significantly better than average uplink connection. The better coverage with fewer base stations helps cut costs.

2 Setting up a network in difficult locations such as tunnels can be challenging. **Sensitive, powerful base stations with low power consumption and small physical size** are important. It must also be possible to operate and maintain them remotely.

3 While regular RF repeaters are an option for tunnels, **a miniature base station can be so much better**. The TB3p requires less power, does not need line of sight to the serving base station, has no RF-isolation requirements and needs no RF expertise for setting up.

3 Reliable contact

1 **Instant connections** are essential in the fast-moving rail environment. Group calls in TETRA systems by Airbus Defence and Space save time, with a connection delay that is always less than half a second.

2 **Free mobility within the network** is also important for the users. They need to be able to roam anywhere in the network, yet use the same services in the same way.

3 Another must is **priority scanning**. Normal scanning allows the radio users to monitor their own talk groups. Priority scanning means that talk groups each have a priority that is specific to an organisation. A radio can scan two or more talk groups while it is engaged in a call. When a higher priority call starts, the radio may leave a current call to join this new call.

3 BONUS BENEFITS TO LOOK OUT FOR

1 **Special applications** are effective at streamlining dispatching. With a TETRA system from Airbus Defence and Space, it is possible to make semi-conference group calls, where group members can hear the dispatcher, but only the dispatcher can hear group members. It is also possible to integrate the radio network with the trains' onboard computer systems, allowing downloading of route plans and other data.

2 It is also a benefit to be able to use the **same, reliable TETRA network** for different purposes, from scheduling a train's arrival at a station, to security notifications and passenger information, all of which can be accomplished with one system.

3 It is very useful to be able to **define communication groups by location**, allowing users to call everyone in their vicinity. With the TETRA system from Airbus Defence and Space, when users push the PTT button, the system automatically checks their location and sets up any group calls to other members in the same place. In other words, the user always "sees" and uses the same group, but the system gathers together the correct users each time they make a group call.

How TETRA is used in railway and metro

Railway and metro operations are very similar, the main difference being the tunnels through which metro trains travel and where radio coverage needs careful planning. In some cases, the same company operates both, like RATP of Paris. RATP can be both efficient and secure with the help of its integrated TETRA network from Airbus Defence and Space.

A typical railway and metro line includes an Operations Control Centre (OCC), base stations in each metro station, radios in each train and passenger communication. Each of these elements is linked through the TETRA system, connecting security guards to conductors via radio, for example, even when the train is deep in a tunnel; or allowing operations managers to simultaneously alert passengers and metro station workers to an emergency.

For example, in Dubai, the metro trains operate without drivers, so it's imperative that the OCC can make announcements directly to the passengers.

A fine example of TETRA success in Asia is the Shenzhen Metro 800 MHz TETRA network delivered by Airbus Defence and Space. The largest metro integrated TETRA network in the world, it covers five metro lines running throughout Shenzhen city, with an average daily passenger flow of around two million.

The same reliable TETRA network can be used for different purposes, from train scheduling to security notifications and passenger information.

For more information on TETRA for rail networks, contact marketing@cassidian.com to book a one-to-one consultation.

Trials prove **LTE and PMR** can work together

Need advanced data services to add extra capability to your PMR network? New trials show that adding 4G LTE is both easy and cost-effective.

We live in a world of data. The growth in its use is staggering – more data cross the Internet every second than was stored in the entire Internet just 20 years ago.

Digital networks like Tetrapol and TETRA are excellent at keeping emergency services in touch. Yet, how much better would it be if they could also use broadband data like private users can?

Answering this question was a recent series of trials which sought to marry the voice and group management advantages of Tetrapol and TETRA with the high speed mobile broadband data capabilities of Long Term Evolution or LTE.

The tests brought together the PMR solutions and product know-how of Airbus Defence and Space and the LTE expertise of Alcatel-Lucent. The major component was a new dual-mode base station developed by the two partrners, which showed it could readily support both Tetrapol/TETRA and LTE services.

Proving the system

Conducted in France, Spain, the Middle East and Mexico, the trials proved conclusively that, by using existing sites and neighbouring frequency bands, new 4G mobile broadband capabilities can be added to existing Tetrapol and TETRA networks. And all of this can be done cost-effectively, without disrupting the existing PMR network.

Availability, reliability and resilience were key requirments. The broadband services passed with flying colours, meeting all the required levels needed to support public safety organisations' mission critical communications.

Airbus Defence and Space is keen to gather more performance data from other PMR networks and is encouraging operators to conduct further trials. Please contact us for further details at marketing@cassidian.com.

Mexico users see latest Tetrapol developments

A recent event in Mexico saw Tetrapol users in the country updated on some exciting new developments set to transform the ways they use their network.

Users of Mexico's IRIS network recently had the chance to see, try and test the latest Tetrapol developments from Airbus Defence and Space in the Technology Innovation Forum.

Held in November, the event attracted more than 90 representatives from local authorities and other organizations, including armed forces and utilities. They had the chance to learn how Airbus is developing control rooms, Tetrapol IP and products and solutions linked to the platform, as well as Tetrapol 4G.

In addition to seeing product presentations, delegates also interacted with the technology through live demos, getting a feel for how Tetrapol and its associated products are evolving. The event underlined Tetrapol as a modern technology highly relevant to the new needs of PMR users such as mobille broadband capacity

Four conferences formed part of the event – Trends in Mission Critical Communications, Smooth migration Tetrapol IP, Tetrapol 4G and innovation in 066 Control Rooms.

Tetrapol is up to new demands

As the global situation changes, the challenges facing public safety institutions are also evolving. These institutions are facing new demands, including real time information and the need to change from purely voice to data operations.

Tetrapol 4G is a robust solution that permits a smooth migra-

tion through IP, allowing users to take advantage of the equipment and terminals already installed in their network. It is also the only option that offers user organisations the ability to incorporate high speed data transmission on their existing infrastructure and frequency band.

The Forum also gave IRIS users their first view of the Airbus TPH900, which offers integrated GPS and man down features. These are the ones most relevant to IRIS network clients as they offer greater safety and control within operations.

Migrating towards IP

Based on its maintenance program, Mexico has already started the migration of nine states towards Tetrapol IP, with Baja California becoming the first to start the process.

IRIS Network customers were pleased with the event, as the Forum represented the opportunity to interact with the new offer from Airbus Defense and Space. It was also a good opportunity for them to verify that all the developments presented in the previous years are now becoming reality.

German Armed Forces get moving with travelling TETRA/LTE network

German Armed Forces now have the ability to use TETRA voice and LTE broadband data on the same system, with mobile base stations that can move with the troops.

The German Armed Forces have accepted the world's first prototype of a mobile TETRA LTE radio system, giving them the power to run broadband data and voice services in one integrated solution.

The system was developed from a partnership of Airbus Defence and Space and Alcatel-Lucent that aims to provide field radio communications systems with mobile broadband data capabilities. Airbus Defence and Space is using its know-how in the design of PMR solutions and products in the 400 MHz range and control room applications, while Alcatel-Lucent is using its expertise in LTE.

The system allows German Armed Forces personnel to communicate using a moving base station in a vehicle. These travelling cells support some 100 users of voice and data services.

The 400 MHz spectrum is used for voice over TETRA and data over LTE

transmission, a band allocated for military and German security authorities and organisations. Using this frequency means the system offers a large coverage for data transmission for the first time. Enhancing the TETRA radio system with broadband LTE technology enables larger volumes of data, for example images or videos, to be transferred alongside voice services.

Tests prove system capabilities

The system was assessed over two weeks of exhaustive testing, during which more than 100 assessment cases were used to test aspects such as radio coverage, data transfer rates, performance while moving and interfaces to other systems. With the base stations mounted in two armoured vehicles, the scenarios involved the connection of mobile and hand-held radios to stationary and moving radio cells.

Performance above expectations

The results achieved for radio coverage performance were above expectations. Initial evaluation of the results shows that similar ranges were attained for LTE data transfer as for TETRA. In the case of stationary cells, this was, in ideal conditions, up to 19 km. Data rates were dependent on the distance and antenna used and were measured at up to 2 Mbps, despite the small bandwidth of 1.4 MHz used for the LTE transmission.

Secure data services

to be piloted in Sweden

Airbus Defence and Space has been selected to participate in a pilot project for secure data services to Sweden's Rakel TETRA network, the national emergency communications network.

The pilot, which will run from January until May 2014, will give users real-time access to mission information, as well as providing a wide range of advanced multimedia services. It includes secure, high-speed mobile broadband access using several commercial mobile networks for enhanced data coverage and availability.

The service will be handled by the Airbus Defence and Space user management tool Tactilon®, which is also used for the Rakel TETRA network.

The project is a cooperative venture between the Swedish Civil Contingencies Agency (MSB), the Swedish National Police, Uppsala ambulance services, Falu municipality and Airbus Defence and Space.

Robert Westin, Country Manager Secure Communication Solutions at Airbus Defence and Space in Sweden, says: "To address the rising demand for high-speed LTE, we see our role in helping our customers to use commercial broadband networks, but with high levels of security, availability and close integration within their existing narrowband services."

Rakel is one of the largest secure TETRA radio communications networks in the world. All the main security forces in Sweden use Rakel, totalling more than 400 organisations, such as the police, coastguard, customs, rescue services, ambulance services and armed forces, as well as a number of municipalities and private companies. It serves 50,000 subscribers today, a number expected to rise to 70,000 within a few years.

Rakel weathers the storm

Facing gale force winds that had already killed several people across Europe, Sweden's Rakel network faced a tough challenge recently as the country braced itself for storm Simone

With a deadly storm heading their way, Swedes were told to stay at home. Storm Simone had already claimed at least 12 lives as its 150 kilometre an hour winds wreaked havoc across the UK, France, the Netherlands and Germany. Sweden was next.

When Simone hit, almost 80,000 homes had their power knocked out, including 74,000 customers of power company E-on. Simone's strong winds also littered the roads with fallen trees and power lines, as well as overturning heavy trucks.

Rakel steps up

Rakel, the TETRA network operated by the Swedish Civil Contingencies Agency (MSB), came into its own, helping police, utility companies and key community players communicate and work together during the storm.

Police and emergency crews in Skåne (in Southern Sweden) and MSB analyzed Rakel's performance during the storm, concluding it had worked well. Christer Nilsson, Deputy Chief Fire Officer at the emergency services in Bjuv, says: "We have not previously had a good overall picture of the situation. This time, we got all the answers right away and did not have to wait for responses from other agencies."

In Skåne County, the Administrative Board used Rakel to keep its staff in touch. The story was much the same with other municipalities. During the storm, Rakel was used by 14 municipalities, E-on and the Traffic Authority, giving participants a good idea of the storm's progress and effects.

Lessons learned

Höganäs, one of the municipalities in Skåne, concluded that its home care services staff should be

added to the network. Some home care employees' cars were nearly blown off the road and with the mobile network and landlines down, staff were unable to communicate with their management and vice versa.

All respondents felt that Rakel worked well throughout the storm. However, one feedback from users was that sometimes there was too much information in Rakel talk groups. Suggestions were made for an emergency talk group and another for other matters. More field staff also need to be equipped with Rakel.

Although some of the base stations went to standby mode, this did not affect users, as overlapping coverage meant no one suffered, even in the severest weather conditions.

Dissolving borders

– INTERNATIONAL TETRA COVERAGE A REALITY

Communicating between the agencies of different countries is often essential. A pioneering TETRA project between Sweden and Norway aims to make it as easy as using their own networks.

Many countries are now using TETRA networks, bringing incalculable benefits to their public safety organisations. But what about those tricky border areas, where networks meet? A car chase by police that extends across a national boundary, a major accident at sea or some other incident close to a border could require close co-operation between the networks and authorities of neighbouring countries.

Managing a major operation involving many authorities from different countries is clearly very challenging. The main issue is the need for a tool that gives secure and effective communication, allowing the situation to be handled online from end-to-end. This is where TETRA comes into its own with the standardised Inter System Interface or ISI, allowing countries to link their TETRA networks for closer and more effective co-operation with their neighbours.

Sweden and Norway are ISI pioneers

Sweden's nationwide TETRA based RAKEL network is already rolled out and in operational use across the country. Shared between all public safety authorities, it now also serves other parties needing mission critical communication, including counties, municipalities and energy companies. Sweden is now strongly pushing cross border communication with Norway, with the aim of implementing the first TETRA ISI co-operation.

Norway is currently rolling out its nationwide "Nødnett" network and is also keen on cross-border communication system with Sweden. Since 2012, the two countries have been working on the Nor-Swe ICE project, which aims to make it easy for users to communicate from the RAKEL network to the Nødnett network. In the future it will be possible to use RAKEL subscriber units in Norway and Nødnett subscriber units in Sweden.

The ultimate aim is to implement TETRA ISI but a lot of discussion remains on how to make this work in practice. The TETRA ISI features will need to be adjusted to fit the operational procedures of both countries. Technical aspects also need to be considered as the TETRA networks are manufactured by different vendors.

First steps to co-operation with Direct Mode

While the future ISI-based system remains to be resolved, Sweden and Norway are taking the first steps towards cross-border co-operation by using existing TETRA functionality. Direct mode or DMO makes it possible to communicate between TETRA terminals close enough to reach each other. Effective range is then boosted by using repeaters to enlarge the coverage, with a DMO gateway to connect the terminal to the wider network. In this way it is possible to communicate with groups and users in both networks. An example is a DMO gateway allowing two TETRA terminals to connect on the Svinesund bridge between Sweden and Norway.

Command and control centers, where higher level command officers follow the course of events, can be connected and get complete awareness of the situation. The same kinds of arrangements are also in use with Finland and Denmark. Real ISI will connect the networks in a natural way and will be more available and secure.

A European project to activate cross border communication between all European national public radio safety networks is in progress. Known as ISITEP, this involves 15 countries, so there remains a lot to agree concerning procedures, languages and legal aspects. The project also involves practical training and exercises.

Airbus Defence and Space is playing a very active role in all of these projects and in all other developments of critical communication that improve the security of us all.

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.

Obama in safe hands in Sweden

When US President Barack Obama visited Stockholm, the security operation was like nothing the city has seen before. Rakel, the Swedish TETRA network, was at the heart of it all.

When Air Force One touched the tarmac at Arlanda airport in September 2013, it marked an historic occasion - President Barack Obama had become the first US President to make a bilateral visit to Sweden.

As might be expected, security was of prime concern, particularly as US security services judged the country to be "high risk" following the assassinations of Prime Minister Olof Palme and Foreign Minister Anna Lindh.

Stockholm closed to traffic

The main roads between Arlanda airport, north of the capital, and central Stockholm were closed off as Obama's motorcade headed into town. The citizens of Stockholm were asked to leave their cars at home while the areas in the city centre, old town and the around the royal palace were totally closed off to traffic.

A large number of policemen circulated in the city, while the districts around the Grand Hotel, where Obama were staying, were highly guarded. Even manhole covers were welded shut.

The Swedish Armed Forces were also involved in the operation and were in place to monitor the airspace over Stockholm.

Rakel keeps the forces in touch

To support the huge security operation, the Swedish Civil Contingencies Agency or MSB, employed its Rakel network. The network experienced traffic that was three times higher than normal, serving the communications needs of the 2,000 police officers involved.

The Rakel network was supplemented by an additional mobile station set up in the city centre, while selected base stations had their capacities expanded prior to the visit.

MSB has received a lot of appreciation from user organisations following the event.

Overall, there was judged to be very successful cooperation between the police and MSB and Rakel and the users on the day were very satisfied with the network's performance.

Five steps
to find your best radio network

Choosing a radio network is major decision. Get it right and you will have a system that will serve you well, with capable, cost-effective communication features that work efficiently and securely.

Get it wrong and you could be left with an expensive, poorly supported system that does not do what you need.

So how do you go about getting the best system for you and your users?

1 Choose a proven technology

They say there is safety in numbers. So why opt for an undeveloped standard with a small market or a non-standard proprietary solution, when you can have a system that is trusted by thousands of organisations the world over?

TETRA is an open standard and the first systems have now been in operation for over a decade. There is a wide range of TETRA products available, from network elements to radio terminals, from a choice of suppliers. Competition for business means that new products appear regularly and are built and tested to high standards.

2 Not just purchase price

All too often, buyers see the headline price tag and look no further. High price bad, low price good.

But what about the cost of ownership? The cost of operating the network, leased lines, upgrades and maintenance can all add up. Be smart by choosing a vendor who can provide the system with the lowest total cost of ownership.

3 Opt for voice and data in one network

Thinking of one network for data and another for voice? The problem with this option is the extra expense needed to build and maintain two or more networks. A company may need twice the number of people, or pay twice as much to operate both networks.

Users need to be trained to use two different networks, while integration with outside systems and databases requires double the work. The list goes on.

A single network with both voice and data capabilities makes the best use of your investment. Make sure that the data capacity of the network can be complemented with wideband/broadband data later, and you will have a solidly future-proof solution.

4 Think about how the solution will develop

Thinking beyond switch-on day, how will the solution develop once it is installed?

A proven, trustworthy supplier will have a realistic roadmap describing how your network can develop and just what the financial consequences will be.

And stability is important. Choose a financially sound company that can provide solution roadmaps with a span of five years or more.

In the TETRA market, some companies have long-term commitments with governments, a strong indication that their roadmaps are in order and they intend to follow them.

5 Can they really deliver what they promise?

Perhaps the most import question is, will the supplier deliver what is in the contract?

Sanctions can be included in the contract but money cannot completely cover the lost time and effort if the supplier fails to deliver. The network project will be delayed or may even fail completely.

Proven references and long-term commitments indicate that the supplier can be trusted to deliver - on time, with the right quality, and within budget.

Get all these right and you are on course to implement a capable PMR network that will serve you well for years to come.

TETRA: the bedrock of mining safety

The harsh conditions in a mine demand a communications solution that is as capable and robust as the miners that use it. Airbus Defence and Space's TETRA system is up to the job.

The mining of minerals and metals is fundamental to modern society. Everything from food and water supply, sewage treatment, shelter, energy supply, transportation, construction, and manufacturing depends on what the industry extracts from the Earth. The rapidly rising population in China and other Asian countries and the continuing requirements of the developed world have created an enormous demand for minerals and metals. Meeting this need means creating a good working environment in the mining industry, through reliable and safe communication between the employees and good fleet management.

A world of extremes

Working conditions beneath the earth are extreme. Miners often need to crawl on all fours through the tunnels, many of which are only half a meter high. Constantly exposed to dust, mud, noise pollution and extreme temperatures, this challenging environment represents a huge danger for mine workers.

A typical mine will be 1000-3000m below ground and made up of numerous very long tunnels, making cellphone reception

non-existent. To work in such harsh conditions, any communications equipment must be extremely robust.

Designed for mines

Airbus Defence and Space's TETRA communication system offers significant benefits to the mining industry and several mines around the world rely on the Airbus Defence and Space solution to support their operations. These include the Veladero Gold mine in Argentina, the Spencer Copper mine in Chile and the Rheinbraun mines in Germany.

Using their Direct Mode Operation (DMO) feature, Airbus Defence and Space's TETRA radios provide extensive underground radio coverage, allowing them to provide service across the whole mine.

TETRA also supports individual and group calls. The DMO mode enables group communication within a few kilometres in the mine workings. The predefined groups can be created dynamically by the dispatcher during field operations over the air, which also saves the cost of laying cables.

Airbus Defence and Space's TETRA radios also provide good voice quality by reducing back-

ground noise, making communication easy despite the noisy mining environment. The radios are designed for a hazardous environment with high class security and safety features such as the red emergency button, which transmits an alert and the radio's location automatically.

In addition, the radios use a reliable and flexible connectivity and dispatching solution between the central admin office and remote offices. TETRA radios support transportation tracking (AVL) and telemetry applications allowing efficient fleet management. TETRA tracking can be used to locate workers so they can be warned before a scheduled explosion.

A unique set of features

TETRA offers features ideally suited to the mining industry. Reliability, even under extreme conditions, as well as secure communications, help ensure miners' safety at all times. Lifesaving functions like the red emergency button and TETRA broadcast calls also contribute to maintaining a high safety culture.

Consistently good voice quality and easy and quick usage through the push-to talk button means miners can readily exchange the information they need. Individual and group calls on separated frequencies give easier management of different work groups while allowing cooperation between them.

Workers in Barrick's Veladero gold mine in Argentina may be using the highest TETRA network in the world: it operates at an altitude of up to 4,600 meters

Helping field commanders **communicate under stress**

Airbus Defence and Space and Laurea University of Applied Sciences have started a joint study to help field commanders in stressful situations that require voice and data communication.

In a joint study, Airbus Defence and Space and Laurea University of Applied Sciences optimise a RCS9500 radio dispatcher for vehicle use. In the first step, Laurea set up a complete hardware and software environment of the Finnish Police. The RCS9500 was installed in the same environment, with the aim of optimising the configuration and performance of the solution.

The Finnish Police is using TETRA and a blend of commercial broadband networks for communication. As such, the RCS9500 will be configured to use all the networks currently used in police vehicles. The study will show how the RCS9500 performs dispatch-

ing over commercial broadband networks, aiding a smooth migration to public safety broadband.

Usability perfected with real-life policing scenarios

In the second step, a usability study will be carried out to perfect the RCS9500 user interface in real-life police scenarios. The RCS9500 allows users to configure and create the user interface they need.

The study conducts a usability analysis of the RCS9500 for Police Field Commander use, developing the user interfaces that best support various police tactics. The results are applicable to other nations that work on field commanding based operational models or with mobile command centres.

Global public safety best practise benefits RCS9500 users world-wide

Airbus provides technological guidance for the study and contributes through its network of global public safety specialists.

"Laurea has proven to be a unique partner, capable of having senior police, fire and rescue, military and other public safety officers focus on developing operative models that take the best benefits of available technology," comments Jussi Simolin, Head of Product Business Management at Airbus Defence and Space. "Our co-operation contributes to Airbus's knowledge of public safety best practice, and benefits all our customers through improving the usability of our products. We plan to make this a permanent tool for technology development and will add other partners to the co-operation."

Laurea University of Applied Sciences – The home of public safety excellence

Laurea University of Applied Sciences, in Espoo, Finland, specialises in service innovation and security, carrying out international research and post graduate education. It brings together public safety and experienced military officers and telecommunication and IT engineers, offering post-graduate and graduate courses on security, security management and advanced security technology.

Research on the security applications of advanced technology is carried out by experts with strong public safety experience and the latest technology knowledge. Through high level education and international research, Laurea has become a unique think tank that combines hardened security specialists with the brightest technology geeks to create new fit for purpose security solutions.

Laurea is a prestigious and recognized trainer in Finland's security field. It is the only university offering a Bachelor's or Master's Degree in Security Management.

For more information, please visit www.laurea.fi/en

Contact us to participate in an international network of experts

If you are interested in participating in the global public safety best practice, please contact marketing@cassidian.com for more information.

Evolving operational processes is not an easy task. Getting new processes out to the field can be even harder. Here's a solution that can make the last bit simpler.

HOW TO MAKE IDEAS HAPPEN

- rolling out new comms SOPs quickly

The evolution dilemma – Good ideas are born on the front line

The life cycle of a good idea for improving something can often be a tough one:

Dispatcher

Thinking during a major communication exercise: "I would like to change talk groups used in this co-operation scenario. Now, the method is so complicated that I need extra time to get the message to the right people."

Radio user

Meanwhile, a TETRA radio user is thinking: "This co-operation scenario is really a mess. Once again, confusion led to wasted time when helping a citizen in need."

After a major comms exercise, the dispatcher and radio user draft an improvement proposal for a capability planner, responsible for delivering the communication tools the users need.

Capability planner

"These user ideas are good, but I cannot easily implement them, even though our system could support many of them. Also, how could I make cross-organisational changes easily?"

Financial officer

Finally, the idea is sent to the financial officer: "Users and capability planners always want new things. Don't they understand it is very costly to buy new software and implement it!"

Slaying the implementation beast and the cost monster

The story above could be completely different if the users had Tactilon® Dynamic Fleet Management. The proposed new feature enables Tactilon to manage TETRA subscribers, RCS9500 radio dispatch users and RCS9500 layout activation.

Easy end-to-end deployment helps Standard Operational Procedures evolve

Users with an appropriate Tactilon account could create and provision RCS9500 users (radio dispatch users) and their parameters, in line with their existing role and organisation. This gives user organisations control of their dispatching needs, giving quick roll out of new talk group access, as well as for other organisations in joint operations.

RCS9500 radio dispatcher allows users to design the layouts to suit their communication needs. There can be different layouts for joint operations, routine day-to-day work, and major events. Layout activation

means distributing new layouts and modifications to the work stations and granting access to them.

In the proposed Dynamic Fleet Management, Tactilon users could activate RCS9500 lay-outs. Changes to the control room environment could be easily pushed from a centrally managed tool, based on users' role and organisation.

Slashing deployment and evolution costs

Complementing current Tactilon and RCS9500 functionality, the Tactilon Dynamic Fleet Management would allow controlled, centralised changes to the communication model, from TETRA radio users to control centres.

It allows gradual evolution of SOPs without costly change orders. The same tool could handle both dispatchers using RCS9500 and TETRA radio subscribers.

Changes are deployed quickly without the need for a "roll-out" team.

As a part of the release synchronisation, Tactilon is guaranteed to work with your TETRA and Secure MVNO solutions and RCS9500-based control rooms.

Tell us what you think

Please contact marketing@cassidian.com and give your views on the proposed new feature. Your input and suggestions will be included in the product management process.

CUT YOUR COSTS for dispatch systems

With the ability to accept changes at any time, the RCS 9500 radio dispatcher removes any worries about rising implementation costs

Command and control room projects can be costly. The costs can rise even further if you need to make changes to the configuration while the project is being implemented.

Luckily, there is an answer to keeping these costs under control. The RCS 9500 radio dispatcher from Airbus Defence and Space avoids the problems and risks of integrating the command and control system to the TETRA communications network.

No penalties: With the RCS 9500, the threat of penalties and damages is a thing of the past because it is designed to allow easy integration into the TETRA network solution from Airbus Defence and Space. Sharing the same R&D and architecture teams guarantees that the integration with the TETRA network is done in the best possible way.

Changes after milestones: The high flexibility offered by the RCS 9500 means that changes can still be made even after freeze milestones have expired. Changes to the graphical user interface of the dispatcher workstations can be made at any time, even if the critical design review has been completed. Just make the changes, save and distribute. This will not lead to delays in the project, and most importantly, you do not need expensive change offers from third party vendors.

User interface in your own language: If you need the user interface to be in another language, the RCS 9500 is easy to localize, without the need for software coding.

Touch screen or mouse: Some dispatchers may prefer a touch screen while others work best with a mouse and keyboard. The RCS 9500 allows this, offering native support for both. Because one product is suited to many purposes, it helps keep design and implementation costs under control.

Easier integration: Thanks to its modern Applications Programing Interface (API), supported by the Airbus Defence and Space team, application vendors can easily integrate their apps with RCS 9500 and benefit from the wide variety of features provided.

The dangers of using an API that is not so modern and capable are many and include it being more difficult and costly to use. It may also not offer the range of features of the RCS 9500, providing a lower functionality and capability to end-users.

If it is not supported properly, then trouble-shooting and root cause analysis may be problematic and new features launched for the TETRA system by Airbus Defence and Space may not become available.

The RCS 9500 is the next-generation radio dispatcher from Airbus Defence and Space. Designed for critical dispatch operations, the RCS 9500 is the operator's choice to keep CAPEX and OPEX spending under control.

For more information, contact marketing@cassidian.com

Good dog! Both Olli Makkonen and his best friend enjoyed the elk barking competition

Elkhounds aid road safety

Big-game hunters and their dogs ensure Finnish highways remain safe after elk and deer accidents. A competition for elkhounds helps keep them and their owners ready for action, tracking dangerous wounded animals.

Wounded elk are not hazards faced by every motorist, but in parts of Finland, they can be a real problem. Hit by cars, the wounded elk often wander off to other highways, causing a further collision hazard.

According to the Finnish Transport Agency, in 2012, police received reports of 1,321 road accidents involving elk and 3,880 involving deer. Luckily, there were no fatalities in these accidents.

This is where voluntary large game hunters and their Norwegian elkhounds enter the picture. Based on agreements between the police and local game management associations, the hunters go after wounded animals and put them down before they can cause additional road accidents.

Competitive barking

Tikkakoski, Finland, in October 2013, was the venue for "VIRVE-haukut", the national competition for elk barking dogs and their owners, who are employed by Finnish authorities. Participants were present from

the Finnish Defence Forces, Police Forces, Finnish Border Guard, Rescue Departments, Finnish Customs and Criminal Sanctions Agency. Airbus Defence and Space was one of the event's sponsors.

Nineteen Norwegian Elkhounds took part in tests under field conditions, with the dog owner and two field judges following the dog's performance. The judges evaluated the time it took for the dog to track down an elk and how far away the bark could be heard, among others.

Volunteers on call 24/7

One of the participants in the competition was Olli Makkonen, a senior fire-fighter based in Savonlinna, with his four-year-old dog Tuikekorvan Hippu. "We volunteers are on call 24/7 to help local authorities and get an average of one or two requests a week."

Makkonen's dog barks at elks and bears. When on duty, the dog carries a GPS collar, with the owner carrying a VHF phone to check the dog's whereabouts. All the equipment is paid for by Makkonen himself but he does not complain – instead he enjoys being able to contribute to improving road security.

Juhani Mörttinen, the main organiser of the elk dog barking competition, is employed by the Finnish Defence Forces in Tikkakoski.

Our **best-ever** magazine cover

The readers' votes are in and Key Touch Issue 1/2008 was voted best cover of all time. Maybe it was the red background that made it stand out?

The runner-up cover was perhaps a slight surprise: issue 3/2013 with its security guard wearing shades came in at second place.

The prize of a special Key Touch polo shirt was drawn amongst the voters and the winner is **Michel Jaquier** from Switzerland.