

# key touch<sup>®</sup>

A woman in a police uniform, wearing a white peaked cap and a dark blue sweater over a light blue collared shirt, is smiling and talking on a black mobile phone. She is standing in front of a metal railing, and the background is blurred, showing other people and what appears to be a public space like a train station.

customer magazine  
1/2017

**Tetrapol  
groups on your  
smartphone**

**Three ways  
to a broad-  
band future**

**Why  
‘future’  
is a verb**

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# WHO'S IN THIS ISSUE?

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



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**JOUNI KEMPPAINEN** has life-long interests in computers and technology and he now focuses on IT, global trends and new media. During his free time, Jouni likes hunting, fishing and photography. *@articrider*



**KAI SCHLICHTERMANN** joined Airbus Defence and Space in January 2016. Working as External Communications Manager in France, he delivers news to the trade press and writes insightful stories on PMR topics. When he is not working, Kai enjoys travelling, skiing, reading and discovering Paris.



**PETRA VAKIALA** is Key Touch's Senior Editor and has been writing for the magazine since 2008. She enjoys researching and writing stories – there are always interesting new topics to dig into! In addition to that Petra is into horse riding and downhill skiing. *@petravakiala*



**TIINA SAARISTO**, the long-time Editor-in-Chief believes in sharing helpful information. "I always get a thrill from seeing the ideas of the Editorial Board come to life in a new issue of the magazine," she says. *@tiinasaaristo*



**SATU LAMBERG** is enthusiastic about the Tactilon Dabat and Tactilon Agnet. These two new solutions will give so much more opportunities to the TETRA users. They bring a great addition to the current portfolio while the traditional TETRA radios still are widely used for many years to come.



**TAPIO MÄKINEN** is an award-winning and published photographer with a strong marketing background and wide experience in the mission critical world. He is an active (Klout 56) contributor to various professional social media forums *@tapiomobile*

## OTHER VALUED CONTRIBUTORS

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# AIRBUS

# Heading towards the future



**WHAT** lies in the future? The Secure Networks Users' and Operators' Conference (SNUC) is always a good indicator of what is on the horizon. With the theme of this year's event being 'Building a successful world together', our keynote speakers analysed the major trends that will impact our societies in the next decades, with of course a specific focus on public safety.

SNUC and all other critical communications events are great opportunities for like-minded professionals to reflect on how technologies will influence, and will be influenced by society and consequently on what will be expected in the future from communications technologies.

One of the most unfortunate trends is the increase of threats to public safety, which makes resilient communication systems more necessary than ever. As shown by the decision of many national authorities to upgrade their TETRA or Tetrapol networks, these two technologies will remain the most effective and reliable solutions in the years to come.

While continuing to develop its TETRA and Tetrapol portfolio, Secure Land Communications is innovating to offer state-of-the-art broadband features to its customers. In this issue, you will learn more about those new mission-critical solutions.

We disclose the latest developments of Tactilon Agnet, our group communication application for smartphones. Already enabling smartphone users to get push-to-talk access to TETRA talk groups; it will soon do the same for Tetrapol.

We also reveal the story behind the Tactilon Dabat, the world's first smartphone and full TETRA radio in one device, and give more details on the SmarTWISP programme, which intends to create a comprehensive application ecosystem for Tactilon Dabat users by offering a dedicated framework to application developers.

I hope you enjoy this issue and find it helpful as you continue on your own communications journey.

A handwritten signature in black ink, consisting of a stylized 'O' followed by a series of loops and a long horizontal stroke.

Olivier Koczan  
Vice-president  
Head of Secure Land Communications



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# Why **future** is a **verb**, not a **noun**

**T**he future is not a noun, it is a verb – to future. The idea of the future as noun – a place or a thing – misleads us into thinking we could see it if we only climbed high enough or had access to some as yet un-invented technology. Instead of thinking about the future as a place or a thing, we need “to future”. To think about the world in new ways, to create instead of to compete, to take a contrarian view and to dare to venture where others do not.

## How “to future”

The future is something to be achieved, not predicted. How can we hunt for the clues to constructing

something new, different, maybe better for our children and ourselves? It all starts by looking for secrets hiding in our midst, then experimenting to find what works and finally recycling failures when they happen.

## Look for the unseen

Being open-minded is the way to find hidden truths. When Silicon Valley entrepreneur Peter Thiel wants to find new ideas, he asks “what great company is nobody building”? focusing on what isn’t rather than what is.

The building blocks of the future are obscured by the present. We tend to avoid truths that clash with a view of the world we hold dear. This is why it is easier and more convenient to see the world for what it is, not for what it could be. Yet only those who go too far will discover how far you can go and a society that seeks progress will always be caught in the crossfire between the old and the new.

## Experiment to find what works

Experimentation is the mother of all creation. Good experimentation, like good gardening, is best summarized by the words “passionate patience”. This is why successful experiments do not happen to just anyone.

## Recycle the failures

We also assume that the future must come from the future and search for ideas labelled “new” when old, even ancient, ideas might be the way forward. We tend to see ideas as a “what” but they may just as well be a “when,” a “who” or a “how”.

Our predictions tend to overestimate changes in the short term but underestimate the long term.

## Think small

When people tell stories about The Future, the narratives tend to be grandiose visions. Yet the future is

not a story and there is no recipe to create it.

There is no recipe but there are ingredients, clues that we can use to craft a future for ourselves. Let these ingredients be small, even trivial. Great things can be accomplished by small ideas.

Should we live our lives according to plans and principles or should we just wing it? Should we live as if life is on rails or a blank slate? The answer: It depends. As British biologist JBS. Haldane put it: “The universe is not only stranger than we imagine, it is stranger than we can imagine”.



This article is built from excerpts from “The Future Book – 40 ways to future-proof your work and life” by Magnus Lindkvist.

Magnus Lindkvist is a trendspotter and a futurologist. He calls his work “intellectual acupuncture” aiming to change how we think about the future by provoking us with ideas, enabling new questions and challenging our world views. He lives in Stockholm, Sweden together with his wife Vesna and two children.

# Three ways to a broadband future

**Choice is good. But it can be hard sometimes to decide which option is the best. Here we describe three different approaches for taking networks into the future. The projects are worth watching to help other organisations make the right choices.**

It's the responsibility of all mission-critical organisations and the whole PMR community to ensure that future communication systems are at the least just as good as, or preferably, better than they are now. In meeting that responsibility, a key capability will be the increased data speeds that future networks will offer.

There are different routes to such future capabilities and here we look briefly at three projects aiming to adopt LTE. Their experiences and the different approaches they are taking will help to guide other decision-makers.

## **Finally, countrywide coverage with LTE?**

The First Responder Network Authority (FirstNet) project in the USA plans to offer an interoperable wireless broadband data service for all public safety users in the country. Interoperability is something that is not currently available in the US and would on its own improve the working conditions of mission-critical users.

Congress has agreed financing of \$7 billion and frequencies of 20 MHz for the project.

FirstNet is a huge project and some delays have already been confirmed. In October 2016 it was revealed that FirstNet would not award a partner for its request for proposals (RFP) acquisition process before November 1. This was most likely due to the contract's size, scope and uniqueness. The results of the November elections may also have an effect on this project.

Exactly when the FirstNet tendering process and the actual construction of the service will occur is still unclear. Voice communication will remain on P25-based systems for several years yet. Also, countrywide coverage will be constructed partly with dedicated broadband, partly with commercial networks.

## **Ambitious schedule for UK's switch to LTE**

In the UK, the starting point is different, as there is already a TETRA network available throughout the country. However, the Home Office has decided to switch this off by the end of 2019 and move all users to a commercial broadband service. The planned sched-

ule is very ambitious as the technology needed (LTE 3GPP Rel 13-16) does not yet exist, while coverage, equipment and many other issues need to be improved before mission-critical users can rely on the new service.

In Korea and Qatar the approach is different - completely dedicated broadband networks. In most countries, this is not possible as frequencies are not dedicated to public safety.

## **Hybrid approach - combining TETRA and LTE**

In some countries such as Belgium, Finland, Germany, Hungary, Saudi Arabia, Sweden and many others, the plan is to approach the future step-by-step. These countries are (or are planning to) use their existing, secure and reliable TETRA networks and at the same time, complement this with broadband data.

They have different approaches, including commercial broadband providers either with or without a secure MVNO model. In some countries, some dedicated frequencies will be available for mission-critical users.

Rather than swallow an LTE project whole, these countries are taking it gradually, keeping what is best about their current networks and building incrementally for the broadband future.





There are  
three different  
routes to future  
capabilities.



SMOOTH EVOLUTION

# Growing use of apps by professionals

**Apps continue to grow in popularity with professional users, but developers could smooth the path by producing apps that make better use of popular accessories such as video cameras.**

**T**hat was one of the messages of Airbus's latest survey into professional app use.

Messaging remains the most common type of application being used daily, with 44% of respondents using them, with public internet services such as searching and social media coming in second with around 35% of respondents. As was found in the first survey, most respondents are already using apps every day so there is strong demand for such capabilities. This is encouraging for app developers and reveals a market ripe for development by providing great apps for professional users.

The new finding of this survey is that there are big opportunities for integrated messaging apps tailored for the needs of public safety and other professional users.

When it comes to operating systems and the devices in use, Apple iOS has become more common among respondents, while people are clearly using more than one device.

## **Rugged devices make their mark**

There is also a move away from smartphones towards more rugged devices better suited to the demanding conditions experienced by professional workers, particularly emergency and public service staff. Yet, most devices in use are still standard smartphones and tablets, perhaps reflecting difficulties professional users face purchasing and procuring something more tailored and specific to their needs.

The popularity of accessories was another focus. Results showed that the most popular accessories to use with mobile apps

were a camera or video camera, with around 38% of respondents, and headsets, with 34% of respondents. Flying in the face of this was the finding that video apps are not nearly as popular, perhaps indicating an opportunity for apps that can help make better use of these popular accessories

## **A trend towards hybrid networks**

Asked about their intentions to adopt new devices, around 42% of respondents said they had plans to adopt hybrid PMR and broadband devices, further evidence for the trend towards hybrid networks.

The survey was also a useful guide to app developers on what users really want from their products:

- Security and ownership of data - control in own hands 65% (56% last year)

- High reliability and availability of the service 63% (54% last year)
- Easy to use 59% (50% last year)
- Solutions integrated with command and control rooms 34% (46% last year)

Despite a market that is a little fragmented, there is good scope for new apps, particularly those that can share data and video

readily. If developers can meet the requirements of users, particularly for security and reliability, there is a growing market ready for their products.

#### About the survey

Our second professional mobile apps survey was widely supported by interested parties across industry and from all parts of the world, ranging from app devel-

opers to those who use these apps to improve their daily work.

In total, 129 people responded, many from rescue and fire brigades, ambulance and paramedics and police, but also many from service providers and application developers as well as users from transport, energy and other industries.

Get your copy of this report  
"Demanding more from  
professional apps - Users speak  
out on app plans".





# The SMARTER WAY to develop professional apps

The work of police, fire-fighters, rescue personnel and other public safety professionals could be enhanced significantly if they had the same capabilities that regular consumers enjoy on their smartphones. The possibilities that would open up with professional data applications could include:

- Share images or video with colleagues (Rich media messaging)
- Know and track the teams' whereabouts (Positioning)
- Use databases, such as vehicle registry or HAZMAT (Database access)
- Collect and manage evidence (Records collection and management)
- Manage operations in the field (Field command or computer aided dispatching)
- Write and complete reports (Office applications).

At the same time, such professionals will continue to use TETRA voice and data services for a long time. The good news is that they can now get the best of both worlds





by using Tactilon Dabat, a new device that combines a smartphone with a TETRA radio. Tactilon Dabat extends their possibilities by adding support for broadband data and applications.

### **SmartWISP – making the most of Tactilon Dabat**

To help professional users get the most out of the Tactilon Dabat, Airbus is looking for ground-breaking, professional apps and accessories for the device.

To achieve this, it has set up the SmartWISP programme. This supports skilled developers and partners who can offer unique critical communication apps or accessories for Tactilon Dabat.

Any app or accessory working in Tactilon Dabat must be certified by Airbus, and certification is only possible for qualified partners. Qualified partners in the SmartWISP programme will get:

- Developer tools
- Technical support services
- Training
- Certification services
- Promotion via Airbus channels.

Once licensed, the programme helps developers to develop and test applications, and ultimately receive Airbus certification. Airbus will support their marketing efforts, and, if the product helps boost Airbus sales, they'll enter a reward scheme.

Find out more by contacting [smartwisp@securelandcommunications.com](mailto:smartwisp@securelandcommunications.com).

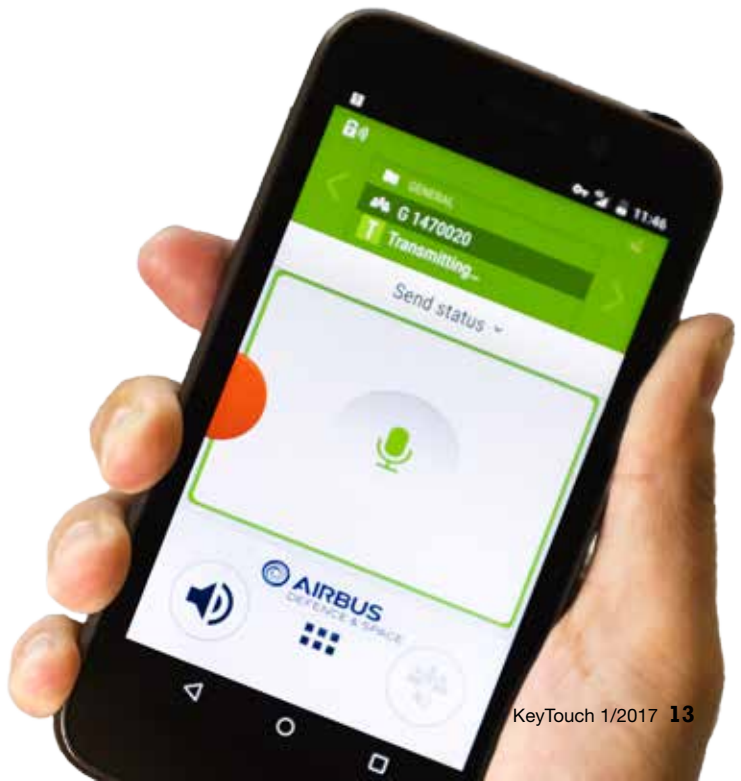
[www.securelandcommunications.com/smartwisp](http://www.securelandcommunications.com/smartwisp)

# Tactilon Agnet

## – the professional push-to-talk app that ticks all the boxes

**P**ush-to-talk, or PTT, means that the speaker presses and holds the PTT key to talk to the group. On a PMR radio, it's the best way to connect a group of people involved in a task.

Recently, we've seen PTT applications claiming to "turn your smartphone into a walkie-talkie". These apps seem to offer a lot and may promise near-instant communications with a push of a button, group calling, and even priorities and emergency calling.



Yet, these generic PTT apps cannot offer everything needed by a professional. Just such an app is Tactilon Agnet, which offers all the vital features.

With Tactilon Agnet, public safety users get to enjoy seamless communication with dispatchers and TETRA radio users. Organizational information and existing processes can be re-used, while the app is both easy to use and secure.

#### **Talk to a group without looking at your radio:**

With Tactilon Agnet, the PTT key is easy to find, even when your eyes are on the action. It is also easy to keep pressed down for as long as you need to.

#### **Keep your place in the queue:**

If you can't speak straight away because someone else is speaking, Tactilon Agnet lets you queue for a turn to speak.

#### **Talk to one person as well:**

Tactilon Agnet allows a PTT call to a single person (with an individual or one-to-one call) – this means you don't have to close the app and make a phone call.

#### **Don't miss important communications:**

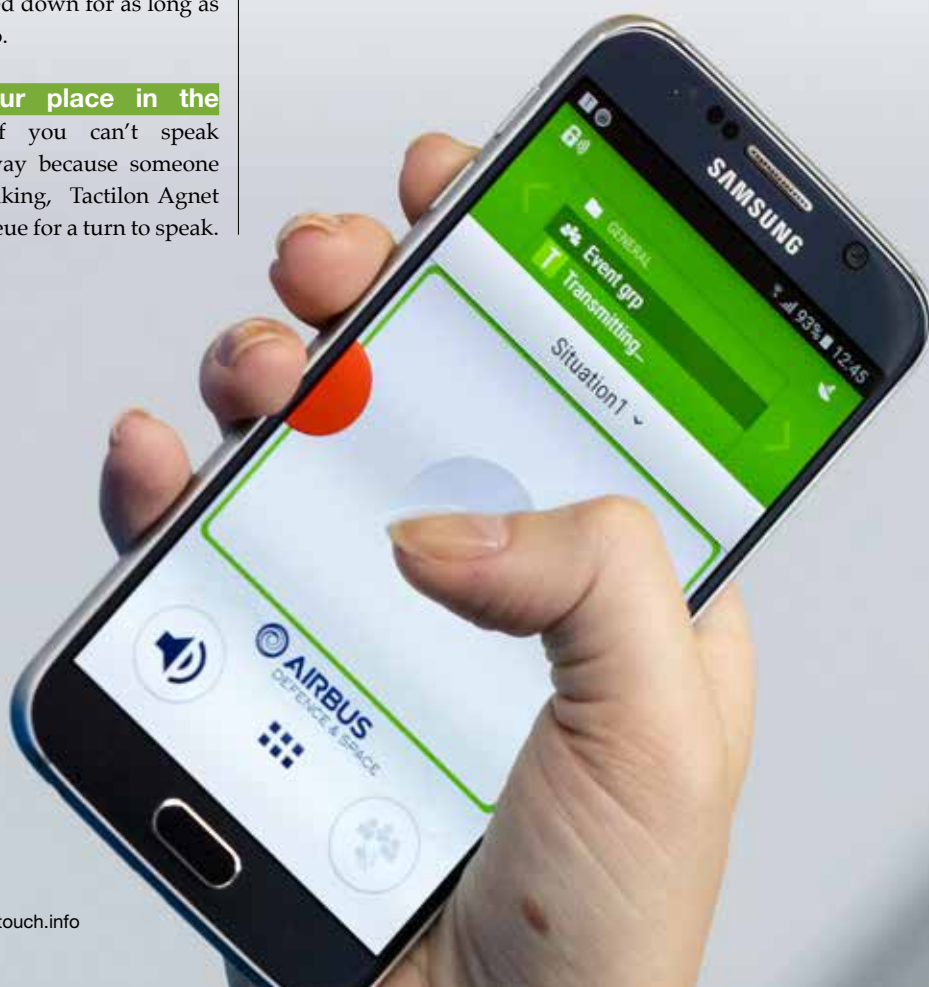
There's another drawback if you can't make a one-to-one call within the PTT app. While you are on the phone, you will miss the communications in the group. Tactilon Agnet not only lets you make a one-to-one call, but can also invite you to a group call so you won't miss it.

#### **In case of an emergency:**

If your work can take you into a dangerous situation, Tactilon Agnet lets you make an emergency call to get help very quickly. What's more, it won't let you make one accidentally.

You don't have to select a number to call – not even 112 or 911. Tactilon Agnet automatically sends the call to the right place. It also allows the emergency call to go anywhere you want - to your dispatcher, your team mate, or a group of people.

And, if your first choice of recipient doesn't answer, Tactilon Agnet will send the call to someone else.



**Do more than talk:** Push-to-talk is mostly associated with speaking, but Tactilon Agnet offers more. It can easily send text or status messages within the app, to the same groups that you speak to, or to individuals.

**Keep track of where you are:** Tactilon Agnet can also track the position of the device. This feature allows the location to be shown on the screen of a dispatching application, keeping users safer.

When looking at a professional app for push-to-talk, why settle for turning your smartphone into a simple walkie-talkie when Tactilon Agnet can do so much more?



# Shopping for a push-to-talk app?

**Wouldn't you like your people to get the advantages of both a smartphone and a TETRA radio network? Use TETRA groups and features in their smartphones?**

Now they can with the Tactilon Agnet application, which lets them use push-to-talk on a smartphone to communicate in a TETRA talk group. With Tactilon Agnet, smartphone users can talk to people who carry a TETRA radio. They can talk to the dispatchers and to the control room as well.

Group communication with the Tactilon Agnet app takes full advantage of the capabilities of smartphones – in a secure and controlled way. Thanks to the app, people vital to an operation can be connected, even when using different devices and technologies.

## How to get started

So how do you get started? There are three different approaches:

**1. See how it works for you** – the standalone approach. This involves upgrading your test bed to TETRA System Release 7. You can test that the app works for your use cases before connecting it to the operational network.

- 2. Trial use** – Agnet test bed connected to the operational network through ISI (Inter-System Interface). This uses an operator's test bed (which runs on Release 7 level). The operational network can still run on Release 6 level. You can conduct a field trial 'network wide' with ISI functionality.
- 3. Full operational approach.** This involves upgrading your operational network to Release 7 level and activating the Tactilon Agnet feature. All network switches must run on Release 7 level and full integration of Tactilon Agnet in the operational network is also needed.

You'll also need some additional building blocks to make it work:

- Taira TETRA Server / DXTA TETRA Server / DXT3 core
- Tactilon Suite for provisioning Tactilon Agnet users
- Taqto® terminal manager to provision the app into smart devices
- Broadband service with Secure MVNO / MNO / dedicated broadband
- Smartphone with the Agnet application

The Tactilon Agnet app is available to use in your network now! If you would like a free consultation, please let us know. Email: [securehybridcomms@airbus.com](mailto:securehybridcomms@airbus.com)



# Talk to Tetrapol groups over your smartphone

Being able to contact smartphone users easily is a huge benefit for many organisations that use professional radio. TETRA-using organisations can already do this with Tactilon Agnet; the latest version also now works with Tetrapol, as well as offering location services.

Field users with the new version of Tactilon Agnet on their smartphone will be able to communicate with their colleagues equipped with Tetrapol radios.

Interoperability for voice, SMS and location services is embedded in the Tactilon Agnet solution which

can connect a Tetrapol tactical cell (IDR) and a Tactilon Cell.

With these features, users will be able to communicate in hybrid groups, allowing people carrying a Tetrapol radio and those carrying a smartphone to communicate as a group in the Tactilon Cell area.

Tactilon Agnet will also offer improved situational awareness, sharing the location of each group member within the group or sharing a Point of Interest (PoI) on a map with the group members. What's more, Tactilon Agnet users and groups can share and receive video and other multimedia content.

**Users will be able to communicate in hybrid groups with Tetrapol radios and smartphones.**



# Pop up LTE networks keep you in touch

**An emergency can arise anywhere – when it does so in a place that has no radio coverage, first responders arriving must ensure they can communicate. Tactical cells, have served them well – and soon they will be served even better by Tactilon Cells.**

Organisations often need to set up a secure communication system at very short notice, for example, in a remote location. The Airbus Tactilon Cell meets this need with a transportable system designed to set up and run a small LTE network.

Tactical cell is the term for tactical, standalone radio coverage. Tetrapol tactical cells are based on a special communication device (IDR) and are easy and quick to deploy. People in tactical cell coverage can communicate over Tetrapol radios in areas that are not otherwise covered by a Tetrapol network.

Where Tactical cells have allowed people to communicate using voice and short data messages, Tactilon Cells enable them to make use of broadband data.

Firefighters, rescuers, or medical teams need to speak to each other, but they also need to share data, such as a map of the incident; video; images; building plans; geo-positioning information; a victim's medical data. The teams on site, as well as the commanding teams and the headquarters, all need informa-

tion from the field. Access to this data improves situational awareness and helps manage the emergency efficiently.

## **Small solution with full features**

A rapidly deployable cell needs to be very portable. A Tactilon Cell can be carried by one person and can be set up in a car or other vehicle.

Although small, it offers all the regular LTE features. As well as LTE radio equipment and associated core network, Tactilon Cell also offers Mission

Critical applications (Tactilon Agnet) and devices.

By complying with the latest 3GPP standards, Tactilon Cell will evolve while remaining compatible with other LTE equipment. The solution can also be integrated with a national broadband network.

Tetrapol IDR tactical cell and LTE Tactilon Cell allow an LTE network to be set up simply by bringing a suitably equipped vehicle on site. With no need to wait for a power supply or the installation of technical equipment, a ready-to-use tactical solution for voice and data transmission can be in action rapidly.



# TETRA and smartphones join forces

**Tactilon Dabat is the first device to combine a PMR terminal and a smartphone in one, it is set to rewrite the rules of professional communications. But how was it developed? What was behind it and what did users ask for? Mika Myllymäki reveals the story behind Tactilon Dabat.**

I try to visit customers as often as I can - they talk a lot about TETRA radios and what they want.

One of things I have discussed with them is the use of smartphones. This is a growing trend, with police officers in countries such as Finland, France, Sweden, Switzerland, United Arab Emirates and the UK already using smartphones in their work. They are taking advantage of broadband and high-resolution video.

Increasingly, the same people use both a TETRA radio and a smartphone, but they do not work well together – two different devices means different procedures and different functions. Carrying two devices is also not ideal.

We asked the question, should we combine TETRA radios with a smartphone?

One solution we tried was a sort of hybrid phone. The first

mock-ups of this were introduced to selected customers a few years ago. The devices were still big and bulky and frankly, were rejected by customers out of hand.

## Halfway house not ideal

So it was back to the drawing board. Another route is to use software to bring TETRA features to a standard smartphone, most notably the Push to Talk, or PTT function.

We built an app that put a PTT button on the smartphone screen.

Some smartphone models we tested even had a physical button that could be dedicated to the PTT function.

Our R&D team tried and tested several smartphone models. The PTT button was implemented into the touch-screen and some smartphone models have even had a button/key for the purpose.

Even though an app isn't as secure or as reliably available as TETRA communication, it can be great. For example, it is great for volunteers or part time staff who need to connect with professional talk groups using their smartphones.

Yet the truth is, an app in a commercial smartphone is not good for prolonged use. It is fine



Mika Myllymäki, Product Business Manager for Tactilon Dabat



for people who do not have to continuously work with it in a full 7-8-hour shift. But if the work entails talking with groups pretty much throughout the working shift, no available smartphone was good enough.

The natural way to use the device and its PTT key is to hold the device in one hand and operate the key with one finger of that same hand. If the screen gets bigger, the device is also bigger and the "key" in the app won't be comfortable to operate. On the other hand, a smaller screen is not the best for using apps.

The combination of current smartphone and professional, prolonged use of PTT just did not work for full time professionals in

the field who need to use TETRA communication constantly.

Our R&D people thought this problematic, to say the least! But they are, above all, problem-solvers and so took a new look at the hybrid idea. Their solution was to bring full TETRA radio functionality into a smartphone that is specially designed for professional, every day, all-the-time use.

#### Use how you want to

It has a touch-screen to use apps, but is also designed to allow voice communication without touching the screen. And if you do need to touch the screen – for example to send a message – it

works while wearing gloves.

The new device is optimised for speech, not music as are many smartphones. It cuts background noise that many professional users struggle with. It also has extended battery life, twice that of a standard smartphone.

The new device is the Tactilon Dabat, a radio that rewrites the rules of what a professional mobile device should be. Discover more about it at [www.dabat.com](http://www.dabat.com).



One of the ancestors for Tactilon Dabat was the "Smart PMR" device which was planned to feature a 3,5-inch colour display.

With Eye Solutions' Real Time Mobile Group Video everyone gets the same view.

# Real time video puts officers in the picture

**Secure mobile broadband is rapidly becoming available to authority organisations around the world. But, once they have the connectivity, what services will be available for end users? With broadband, the obvious application is video.**

**V**ideo is often employed for recording incidents for evidence, but this is primarily used after the event – it does not allow officers to share the dangerous situation as and when it happens. Being able to share real-time video securely between officers in the field and the control room would be a game-changer in many operations.

## **Everyone gets the same view**

Such an application exists in the form of a video solution able to offer simultaneous situational awareness to all connected team members and the control room. Eye Solutions' Real Time Mobile Group Video is designed to help officers respond faster, and more appropriately to the type of event and also to make the work of field teams safer.





Each member with video can be viewed on a map, aiding efficient use of resources. This is a video feed opened straight from the map. The viewer can open any or all video feeds at the same time. Each camera can also be controlled remotely.



A commander's tablet view from four simultaneous cameras, where each camera represents, for example, a police officer or member of any other authority in the field.



Video captured and transmitted in real time from a vehicle. It can be viewed in control centres but also fed to another vehicle or a mobile device in the field, making it easier to prepare for upcoming missions.

The system captures images from wearable video cameras as well as from vehicles and drones. It also automatically uploads all recorded video via the cellular network to the user's dedicated server for both real time and future use.

The mobile software can be quickly and easily downloaded to any suitable Android smartphone, such as the new Tactilon Dabat. This means the organisation

can convert any police officer having Dabat into a source of real time video information.

Users can employ the Dabat's own cameras to capture video or connect an external camera. The user can also view up to four simultaneous video feeds on the screen, sharing information quickly and easily.

Video content is automatically sent either via mobile broadband or Wi-Fi to a server from where it

will be available for after-action reviewing. Once viewed, it can be downloaded and archived.

### One device is better than two

End users often work under pressure, so making tasks simpler is vital. Important benefits of the Eye Solution's system are that there is no need for special equipment or a dedicated vendor specific C2 system. With a Dabat device a user can use critical video, sophisticated authority apps and TETRA voice services all on the same radio.

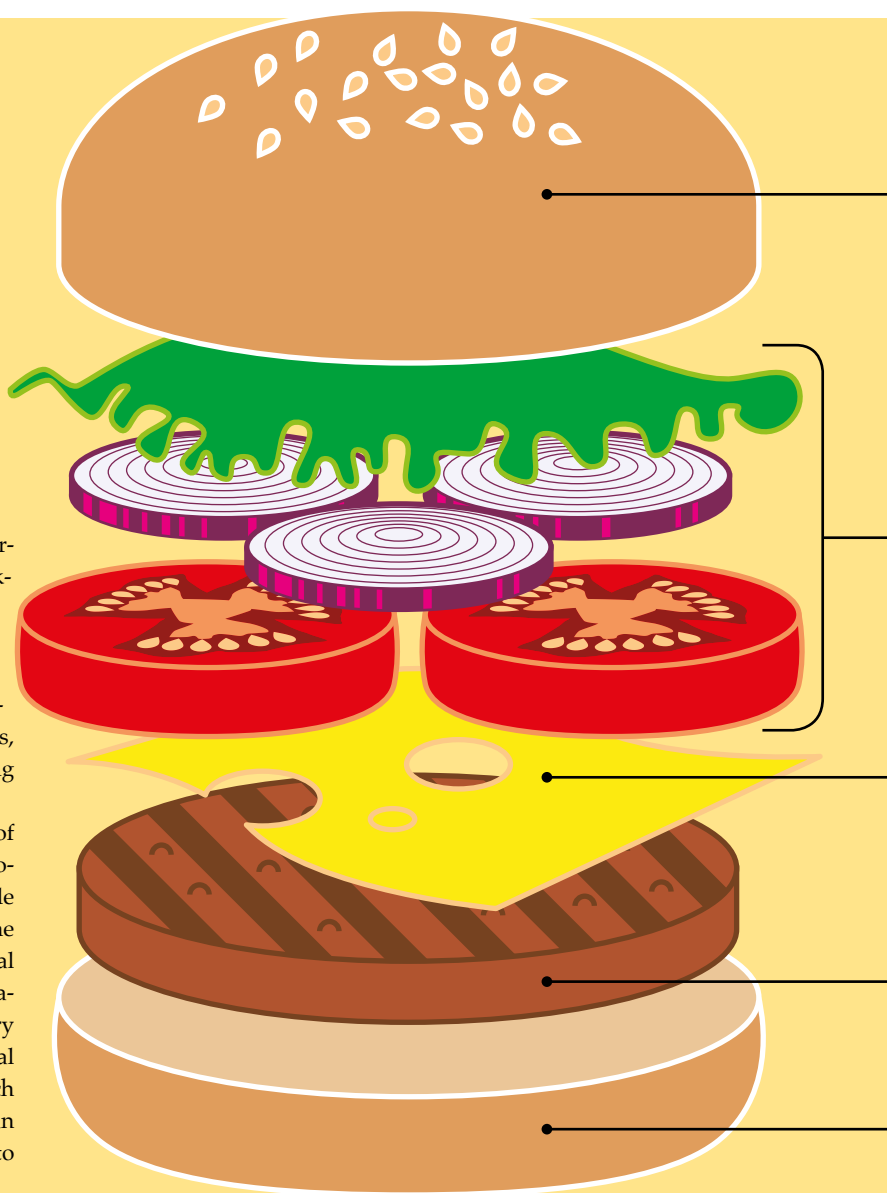


# How to build tomorrow's **communications**

**Picture your critical communications solution as a hamburger. The standard is your basic recipe – but without the public safety beef, trimmings, and the sauce, it will not taste right.**

**M**any public safety organisations are looking for broadband solutions to complement their TETRA or Tetrapol networks. These hybrid solutions will allow the use of new applications, such as video sharing and using databases in the field.

One of the key elements of mission-critical broadband evolution is standardisation. While a standard always defines the reference points and architectural guidelines, actual implementations and products can be very different. End-to-end critical communications solutions which follow standards need more than standardised functionalities to create the taste of public safety.



# critical hamburger

## Key ingredients of a public safety broadband solution

### The top bun

User organizations, their applications and control room solutions.

### The trimmings

Priority management is a necessary trimming to ensure that public safety traffic gets proper LTE network priorities and users get the Quality of Service that they require. Other trimmings: Organisational Management means the management of user organisations' structures, groups and operational models. Subscriber management manages end users, including their roles and group memberships. Tactical management functions handle the daily management of groups and subscribers to support changing field operations, typically done by user organisations.

### The cheese

Mission-critical services need to be connected with narrowband networks: TETRA or Tetrapol. Control room integration is required to link mission-critical services and other applications with control room systems. Similarly, dispatching solutions are also vital.

### The beef

The substance of the solution is the mission-critical services that provide the value: push-to-talk, data and video.

### The platform bun

User devices and the 4G/5G broadband network (LTE is 4G).

### The sauce

Application security is the vital sauce. It ensures that end-to-end public safety services are secure and accessible only to authorised users.

In practice, a wide range of additional capabilities are needed in addition to standard elements before the result is a comprehensive, end-to-end public safety solution – the critical communications hamburger.

From the chef, this requires excellent understanding of public safety customers' needs and operational models, good knowledge of technologies and good integration capabilities.

Make sure that your future critical communications hamburger is not missing the vital ingredients.

## HAVING IT ALL

# – using TETRA and LTE

**Broadband technologies such as LTE offer great possibilities to critical communication users. Making use of high speed data on the beat or getting video from the scene of a major fire or rescue are just two. Does this mean that TETRA is under threat?**

**T**ETRA is the standard that meets the needs of public safety and other mission critical users - can broadband in the form of LTE provide a viable alternative?

Looking at the functions they offer to the service provider and user, it would take days to list all the functional features and possibilities of

TETRA. Compare this to the very basic push-to-talk (PTT) over LTE apps available today - these features could be listed in a minute.

We must also consider the maturity of the two systems. TETRA has been available for many years and is thoroughly proven. This means there is an extensive offering of network, radio terminal and application solutions.

### Is it really an either or choice?

Yet, if TETRA meets the need for reliable, robust and secure communications, why are some people saying that TETRA will be replaced by LTE networks?

During ongoing industry discussions it has been said that LTE can be deployed and used immediately for new broadband applications, to enhance mission and business criti-





**“Hybrid solutions are set to be the future for critical communications.”**

cal processes. There have also been claims that public safety services can immediately adopt the pre-standard LTE group communication services. This has led to an impression that LTE is ready to support all mission-critical communications. This is the ultimate aim; however standardization, solution development and validation is set to take many years.

Even though new broadband ap-

plications can greatly enhance processes and could do so immediately, it is more practical to adopt those apps in a hybrid network environment, as a complement to the truly mission critical TETRA network.

#### **Get the benefits of both**

Investing in a TETRA network does not mean missing the chance of adopting broadband solutions. You

can use TETRA and LTE together, bringing new multimedia services and professional apps into use sooner and more securely – this can be much faster than adopting a broadband system from scratch.

In fact, Airbus Defence and Space has already begun to deploy hybrid TETRA-LTE systems, based on the Tactilon Suite of solutions. Experience has shown that the key to successfully deploying and cost-effectively using a hybrid network is to ensure that the TETRA and broadband networks are tightly integrated and can be provisioned and managed by a single system. It is also important that existing operational procedures are supported while at the same time maintaining the highest levels of security. Tactilon Suite achieves all these aims to bring substantial new value to user organisations.

#### **The future is hybrid**

Hybrid solutions and Tactilon Suite are set to be the future for critical communications – taking the best of both from the truly mission-critical world and the broadband world. In this way, users can get what they need to tackle their day-to-day challenges, in a single, fully integrated solution.

So it is not TETRA or LTE – it's TETRA and LTE. An operator that can offer mission-critical radio communications complemented with broadband will be well-positioned to meet the increasingly sophisticated needs of professional organisations.

In this case, you really can have it all.

# Critical Communications World is back this May!

Experience the future for  
radio communications at  
Airbus booth C5.  
May 16-18, 2017 –  
Asia World Expo, Hong Kong.

[www.securelandcommunications.com/ccw](http://www.securelandcommunications.com/ccw)



## Frost & Sullivan awards Airbus Company of the Year 2016

**F**rost & Sullivan has awarded Airbus DS Communications its Next Generation 911 Company of the Year 2016. The award recognizes innovation and leadership with respect to customer value and market penetration.

The consultancy called Airbus' flagship VESTA product suite the most comprehensive Next Generation 911 emergency call solution in the market. It replaces aging

systems with a solution that provides IP Selective Routing. It allows an upgrade to a full i3 emergency service-routing proxy and emergency call-routing function.

Airbus DS Communications is the American arm of Airbus Defence and Space Secure Land Communications. In addition to call handling, it delivers communications network as well as routing and database services.

"We are honoured that Frost & Sullivan commends our steadfast commitment to an industry in an era of transition to full Next Generation 911," said Bob Freinberg, CEO of Airbus DS Communications. "This award is a tribute to all Airbus DS Communications employees who support our customers every day. This is a time where 'Critical Matters' will matter the most."



**Read more:**

[http://airbus-dscomm.com/  
pdf/frost-sullivan-study.pdf](http://airbus-dscomm.com/pdf/frost-sullivan-study.pdf)





image: iStockphoto.com/omeisukugoku

# Finland and Norway to link networks with ISI

Cross border cooperation between Finland and Norway is set to become much easier when their national authority networks become linked later this year. The green light for the joint project follows the signing of a Letter of Intent (LoI) to link the two countries' authority networks with a TETRA Inter-System Interface (ISI).

Linking Finland's VIRVE network with the national network run by Directorate for Emergency Communication (DNK) of Norway will make it easier to secure the 736 km of common border in Lapland. There is a long tradition of authority cooperation in the region, with the new agreement following the first cross-border TETRA ISI established between Norway and Sweden in 2016.

DNK's Cecilie B. Løken and VIRVE's Jarmo Vinkvist signed the LoI at Critical Communications Europe in Copenhagen on 8th February 2017.

Jarmo Vinkvist, CEO Suomen Virveverkko Oy, of Finland's State Security Networks Group, says: "Seamless cooperation between agencies is a key success factor of the VIRVE network – with the ISI connection the same benefit can be extended to daily operations with Norwegian authority colleagues."

Norway's Tor Helge Lyngstøl, Director, DNK, says: "DNK is proud to extend the successful partnership we have with Sweden to our Finnish neighbours. We have learned that interoperability is not only a technical issue, but must involve the alignment of routines and procedures for emergency services."



Cecilie B. Løken and Jarmo Vinkvist

# 6 reasons why PMR base stations are fascinating

Many users may take PMR base stations for granted but they are fascinating things. Here are six reasons why.

1

## Dedicated engineers

Designing the first TETRA base station in 1996 was technically difficult. In fact, some doubted that it would succeed. The dedication of engineers who always came up with a new solution when needed ensured we have powerful TETRA systems today.

2

## Triumph can follow adversity

Conquering one challenge after another, this fabulous design team got the world's first TETRA base station working. Today, base stations are probably performing beyond their wildest dreams back then.

3

## Simple and not so simple ways to increase radio coverage

Radio coverage is the area around a base station within which radio users can talk to each other.

Some common ways to boost coverage:

- Taller antennas
- Maximize transmit power
- Increase base station receiver sensitivity
- Use sectors to increase coverage
- Advanced antenna solutions.

4

## However, even simple ways to increase coverage may not be so simple

- Taller antennas are difficult to set up
- Very high power transmitters are not practical
- Higher transmission power quickly drains radio terminal batteries
- Improving antenna gain needs a bigger antenna.

5

## An unmatched breakthrough

Third-generation, high coverage TETRA base stations use six receivers per carrier to give circular coverage. They also use advanced antenna solutions, common in commercial mobile networks and have a very high transmission power. These improvements give up to 50% more coverage than older methods.

6

## Base station coverage does not have to be circular

A typical base station will provide more or less circular radio coverage, but it would be smarter to cover pipelines, roads and railroads directionally. A base station using two cross-polarized panel antennas back-to-back can cover a long, narrow area.

TB3-series TETRA base stations are the only TETRA base stations that can achieve coverage-maximizing, high-gain, virtual omni configuration. They are also the only ones to offer directional, other than circular coverage.



# When you need to stay in touch indoors

The world's smallest TETRA base station delivers reliable indoor coverage.

A fire in a large shopping mall is a major headache for emergency services. The first task is to safely evacuate hundreds of people and this has to happen before firefighters can begin to tackle the blaze.

Firefighters, police and paramedics rely on their handsets and a digital network to co-ordinate their efforts. But what if they cannot communicate once they enter the building? In banks, train stations, airports, hospitals and shopping centres, police, ambulance and the fire service need to be able to rely on a secure TETRA radio network.

As yet, many facilities open to the public in Europe and elsewhere have no indoor coverage for digital radio communications, meaning public safety workers may not have the communications they need. Nevertheless, providing and installing efficient TETRA base stations would be very simple for building owners.

## A stand-alone solution

The answer is to have base stations both connected to and independent of a radio network. These need

to be small and compact, as well as have special frequencies. This approach backs up and extends the network as well as improves indoor reception.

Airbus Defence and Space TB3p TETRA base stations operate autonomously in trunked mode, making them ideal for maintaining radio coverage in large buildings. These standalone TB3p mini TETRA base stations have the same capabilities as network base stations – they support individual or group calls and also so-called broadcast calls, short messages to registered group members within a radio cell. Moreover, it is now possible to make emergency calls in the selected TMO group. Data services are also supported.

## Activated in seconds

In Germany, the TB3p TMOa base station also interfaces with the fire service control room, meaning the base station can be activated in seconds. Filter functions ensure that only emergency services' devices are granted access to the TMOa cell. TB3p TMOa base stations perform self-diagnostics at regular intervals, while also allowing remote maintenance.

Even when neighbouring base stations fail, the TETRA TB3p TMOa base station will continue to operate. For companies with large buildings, such as train stations or shopping malls, this is a cost-effective way to provide a reliable digital radio network.



# TETRA helps chemical park secure its communications future

**Covering almost 700 hectares and employing 2,500 people, Kokkola Industrial Park is the Nordic region's largest chemical cluster, home to many top companies. KIP Service provides these with vital infrastructure and support functions, including safety, security, rescue and firefighting. With such a large and varied area, communications need to be reliable, efficient and uniform.**

**E**ven by European standards, Kokkola Industrial Park is large and varied. Home to chemical companies and facilities such as railroads and a harbour, it is also not easily managed.

Jussi Lång is the Chief Security Officer for KIP Service. He is responsible for coordinating security issues with various authorities and companies in Kokkola Industrial Park. The companies know how to work safely, but with so many people working in a specialist line of industry in such a

large area, you have to be prepared for the unexpected. According to Jussi, this creates a significant challenge.

## Rapid notification required

When something out of the ordinary happens, companies must be immediately notified to avoid bad consequences. To ensure this, a TETRA network and terminals are in use throughout Kokkola Industrial Park.

TETRA is used mainly in security-related matters and within the rescue unit. Transportation needs to be directed, doors opened, water delivered

to the fire department. TETRA enables smooth communication, allowing events to be coordinated efficiently.

## Keeping it simple and efficient

Communication must be extremely reliable, as well as easy and convenient for everyone. Most people working at Kokkola Industrial Park are not security experts, and not everyone is accustomed to advanced mobile technology. Simplicity is essential when it comes to delivering the message the right way.

This brings up the feature in TETRA that Jussi perhaps values the most - the ability to send everyone the same message simultaneously.

"Providing the companies in the area with correct real-time information, especially in an unexpected situation, is both essential and challenging", Jussi says. "Before TETRA, we tried to do that with mobile phones, which meant making separate calls to every number, and there are just too many of them. It was evident that some people we needed to reach would not be able to answer, or were busy with another call."

With TETRA, one group call or message can give everyone the same information.

## Smoothing out the bumps

Besides safety and security, the companies with production facilities use TETRA to make their operations run smoothly. Add-ons such as Blue-



tooth headphones help people stay alert while carrying out their tasks.

Every factory has its own call group to handle daily processes. With TETRA they can also contact area guards, fire and rescue or other authorities.

Great benefits have also been achieved in communication between various KIP Service departments. When guards, fire department and

the information center can easily get in touch with each other, daily work becomes smoother.

"Even if we need to communicate about a routine situation that needs to go to everyone in the area, such as road works or a construction site, TETRA is extremely useful," Jussi says.

In relation to stability, performance



and functionalities, Jussi also sees TETRA as a cost-effective alternative to any other communication system.

Compared to GSM phones, fewer terminals are required, they also last longer and are more robust. TETRA radios can also be readily repaired.

Looking at the future of Kokkola Industrial Park, Jussi sees his crew at KIP Service using more TETRA terminals, adding functionalities such as location services and alarm calls. He strongly recommends TETRA to every industrial operator looking for secure and reliable communications. He suggests gradually building up the number of terminals to learn how to use them.

"TETRA's reliability is in a class of its own. For safety, operability and resource allocation, it is definitely a move worth making," concludes.





# Active paging

– new capabilities for old technology are a proven success

**It's safe to say that paging has something of an image problem – a mainstay of 1980s communications, some people see it stuck there, superseded by more advanced 21st century devices.**

**Y**et paging remains popular, especially in Germany, a country that is no slouch when it comes to adopting the latest techniques, such as Active paging. Active paging turns the humble pager into a two way device, allowing people to let the control centre know if they are available.

The concept has come to fruition in the form of the P8GR pager from Airbus. The result of co-operation between the company and the German state of Hesse, the product is set to transform the way firefighters and other emergency staff work. Some 50,000 P8GRs are due to be rolled out in the region over the next

few years following intensive testing of 1,000 devices and accessories in real-life situations.

Antti Eskelinen, Airbus Product Manager for the P8GR, says: "The development was a true co-operation between a visionary customer who believed in 2-way paging and a development team capable of solving complex design challenges."

## Firefighters get hands on

Last December saw the first chance for users to get their hands on the P8GR as 33 firefighters and rescue service





staff were presented with the Airbus devices at a meeting in Sachsenhausen in the Waldeck district.

Bernd Schäfer, first deputy city brigade inspector, and Andreas Przewdzing, second deputy city brigade inspector, have configured P8GRs for over 150 relief organisations in their district.

"With this number of P8GRs we were not sure how long we would need to configure them for our operational force," says Andreas. "Fortunately, the Taqto device management software allowed easy configuration. It took about an hour from the download to the first configured P8GR, with further configurations much easier from then on."

"I am glad that we can now use the technology," says Bernd. "As an operational leader, planning of my forces is very important and I am convinced that this technology, with its active feedback and availability status, can bring much value to future operations."

The next stage involves operating the new devices in parallel with the old to report any problems, with a view to shutting down the analogue networks in mid-2017.

Herbert Schmidt, Technical Solutions Manager for Airbus in Germany, says: "The rollout in Hesse has just started, so the customer isn't yet aware of all the advantages. Operational use with the control centre will demonstrate the many benefits and opportunities of active paging."

### A big future for active paging

"Now four years have passed since we started the project, it is encouraging to see that the TETRA community is developing new applications and devices for TETRA pagers," comments Antti. He sees new solutions emerging such as Tactilon Agnet, which allows alerts over commercial networks. Access to broadband data will allow the transfer of

more information to better prepare staff for their mission.

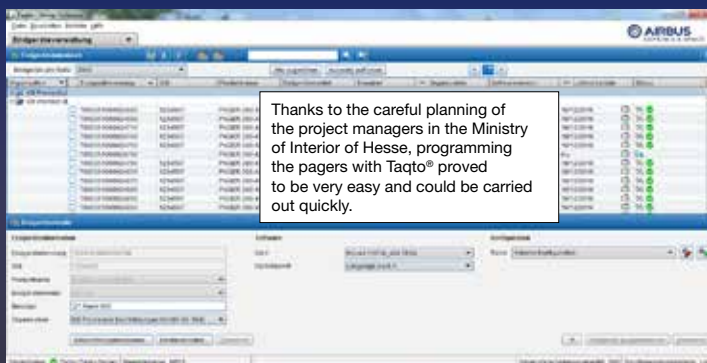
AlaMo, a system which enables fire brigades to monitor the response of their forces, is already available from Airbus.

Adds Antti: "I believe that experiences in Hesse will encourage other organisations and operators to consider pager devices or alternatively deploy call-out to handportables. As well as public safety, there is huge potential in the healthcare, industrial and transportation sectors."

Clearly, P8GR is not just a device, it is the center of a system which should allow dedicated public servants to be even more efficient on duty.

For more about P8GR and the story of active TETRA paging, visit our product webpage.

**Watch  
P8GR-  
video  
here:**



Thanks to the careful planning of the project managers in the Ministry of Interior of Hesse, programming the pagers with Taqto® proved to be very easy and could be carried out quickly.



# Radio questions?

– skilled distributors have the answers

**How do I program my radio remotely over IP? Which accessories are compatible with my radio?**

These are some of the everyday questions put to Airbus distributors, who need the answers at their fingertips to give customers the service they demand.

Providing these answers means knowing the radios inside out, giving an understanding of what the customer really needs

and the ability to solve their challenges with the right solutions. The result makes for good business, with both parties happy.

Gaining this level of in-depth knowledge takes time and dedication, supported by Airbus, which provides thorough training for its distributors. Distributors start by gaining a basic knowledge of

radios and programming, and progress on to technical training. Yearly refresher courses enable continuous learning and keep distributors on top of innovations, features and the many and various programming possibilities.

## A mark of quality

To master the demands of the critical communications market, distributors need a high baseline technical expertise in Airbus Defence and Space products to ensure customers are provided with an excellent service.

Radio users can be confident that their distributor has this level of knowledge by looking for the Airbus Accredited Partner logo. Accredited Partners may use the official logo on their website and in literature, a sure sign that they provide quality advice and service.

Started last autumn, the Technical Accreditation programme puts distributor staff through comprehensive training to provide them with a high technical self-sufficiency and an up-to-date competence about Airbus Defence and Space products.

The training sessions end in a final exam which must be passed to gain Accreditation status.





### A thorough TETRA hands-on-training

Several TETRA technical training sessions are organised every year at Airbus premises in Finland and in France. Airbus experts can also offer local training, like the session for our Asian distributors, held in Hong Kong in September 2016. Some 24 participants from China, Hong Kong, Indonesia, Malaysia, Singapore and Taiwan participated in the TETRA technical core skills training session over four days. The participants achieved the required scores and passed the exam, entitling them to use the Accredited Partner logo.

Participants accessed a live TETRA demonstration and hands-on training using the latest products and Taqto® Configuration & Management Tool. In addition to the technical training, participants learned more about Airbus TETRA solutions, such as Claricor Cell, Claricor 7, Terminals updates and Tactilon Suite with the Tactilon Dabat as the star of the show. Tactilon Dabat is the first device to incorporate both a smartphone and a TETRA radio.

Ivan Lam, Business Development Director from Honoh Limited in Hong Kong, says: "Through Airbus experts, you

not only learn the skills of TETRA hands-on, but also keep up-to-date with Airbus products. These are the essential elements for us to deliver the best solution to the most demanding professional customers. Training near our area is also a great opportunity to meet our closest partner and share our experiences."



When selecting a TETRA radio, your duties and routines, working environment and personal preferences should lead the way. Whatever your needs, Airbus TETRA radios have the customizable software and useful accessories to suit you.

# One radio – many user groups

## TH1n slimline TETRA radio

At only half of the size and weight of a conventional radio, the TH1n does not look like a traditional PMR device. Yet with IP65 classification, it is as rugged as its bigger brothers and packs a full set of professional features. TH1n fits in any pocket, can be attached to any type of clothing, even a business suit, or carried on a lapel or shoulder via its carrying devices. Other accessories allow the TH1n to be used discreetly in covert operations.

The slim line



TH1n is the favourite TETRA radio for healthcare and social service workers, while police officers also welcome a smaller radio to lighten their load. The TH1n is an excellent radio for airport staff at check-in, the departure gate or in offices. Most users working indoors prefer the light-weight pocket-size TH1n and clearly think “the smaller – the better”.



## TH9 handheld TETRA radio

Police, firefighters, military, army and security personnel usually prefer the larger, more traditional design of the TH9 handheld radio, even though both it and the TH1n are IP65 classified. TH9 and THR9i are available in different frequencies, so they complement each other in certain areas. Guards, transportation

services and ground handling crews at airports are also typical users of the TH9, one important reason being its integrated Bluetooth® wireless technology, removing the need to use wires for accessories.





## THR9 Ex ATEX TETRA radio

Oilfields, refineries, rigs, harbours, airport fueling areas – firefighters and other users at these sites all benefit from the robust THR9 Ex TETRA radio, which combines high performance and communication security in an intrinsically safe package. With ATEX and IEC-Ex certification for both gas and dust, the THR9 can be used wherever flammable substances are produced, processed, transported or stored.

THR9 Ex is the only ATEX radio that can have its battery changed in the ATEX area, the same applies for audio accessories, while Bluetooth frees users from wires. Designed for extreme environments, THR9 Ex can even be used without additional protection such as a leather case, which would prevent battery changing in the ATEX area.



## P8GR active TETRA pager

The P8GR active pager is small and light, weighing only 145 grams. Rated at IP54, it is rugged and has a standby time of over 48 hours. Its compact internal antenna makes it easy to carry in a pocket or on a belt, while an external antenna in the home station offers even better indoor coverage. The P8GR brings the full benefit of TETRA networks for secure two-way alerting of personnel.



The P8GR pager is perfect for volunteer and on-duty firefighters, rescue and relief forces, as well as hospital and maintenance staff. When additional resources need alerting, the P8GR is the right tool for the job. With the P8GR device, paging enters a new era.



# Vote for **your**

Our cover stars are waiting for your vote – which issue should receive the title of the best Key Touch magazine cover?

IN TOUCH



**01** Key Touch  
German issue  
2016–2017



**02** Key Touch  
3/2016



**03** Key Touch  
2/2016



**04** Key Touch  
1/2016



**05** Key Touch  
2/2015



**06** Key Touch  
1/2015



**07** Key Touch  
3/2014



**08** Key Touch  
2/2014



**09** Key Touch  
1/2014



**10** Key Touch 3/2013  
(also German issue  
2014–2015)

# favourite cover



**11** Key Touch  
CCW focus  
(2/2013)



**12** Key Touch  
1/2013



**13** Key Touch  
3/2012



**14** Key Touch  
2/2012



**15** Key Touch  
1/2012



**16** Key Touch  
German issue  
2011-2012



**17** Key Touch  
Brazilian issue  
2011



**18** Key Touch  
3/2011



**19** Key Touch  
2/2011



**20** Key Touch  
1/2011

Have a look at these 20 beauties and get voting.

Go to

<https://www.surveymonkey.com/r/keytouchvote>  
and choose your three favourite covers from the list.

Voters will be entered into a draw for the chance to win a small prize.

Please enter your vote by 30 April 2017.



# DID YOU KNOW...

## radios can cost more than the price tag says?

**D**id you know you that the price of a radio is not always as simple as it first appears? If you are comparing the unit price of two radios, you need to check that they really are comparable. What do you get for the price? Does it meet all your demands, as well as all the security requirements of your organisation and network operator?

A TETRA radio unit on its own is worthless if you don't have all the elements that make it a working unit. So, instead of simply considering the radio's price, you need to see the whole package.

### Has it got everything you need?

The most important thing is to check the radio offered actually works in your frequency and has the correct TETRA Encryption Algorithm (TEA) activated – this will be either TEA1, TEA2 or TEA3. Because without the correct TEA in both the radio and base station, your radio can never connect to your network. You also need the proper software to operate it, a battery and a charger to get it powered and not forgetting an antenna.

### Cheap can mean expensive

Your radio must be configurable to fit your specific duties. Check that the functions you need, like GPS, are actually included. If the offered price includes only the radio unit, it may seem a bargain, but you will need to buy all the other items separately. The result could be a much higher final price than a "plug & play" radio package, with all the necessary items included in the price.

Don't fall into the trap of a low price if it doesn't give you what you need –always check that it gives value for money.





# 3+3+3

Great resources to help evolve your PMR network to broadband

Are you planning to introduce mobile broadband and mobile apps but don't know where to start? Don't worry – these videos and guides will explain how to move towards the broadband future, the smart way.

## 1. SETTING THE STRATEGY

There are several options for public safety organisations seeking to implement mobile broadband services. This has led many to ask, what is the best strategy for the broadband evolution?

Let's be real - existing broadband networks do not yet meet rigid mission-critical requirements. It would not make sense to replace an existing capable public safety network with an alternative that does not meet the critical requirements.

One very cost-effective approach is the hybrid network, with which a public safety organisation can continue with a TETRA or Tetrapol network for mission-critical voice and data and introduce mobile broadband services step-by-step. These services can be based on a dedicated broadband network, commercial services with Secure MVNO, or a combination of the two.

Hybrid network investments add value today, but also offer long-term benefits by forming a bridge between existing narrowband networks and future solutions.

### Building your critical communications investment strategy

This whitepaper examines the key questions on the PMR future. Most importantly, what is the best strategy for critical communications investments.



#### WHITEPAPER

How to get more from your TETRA network and build your future, too



## Delivering secure data services for public safety

Secure MVNO, a new mobile data service, allows the PMR operator to provide attractive new services, while also bringing in more revenue. It also safeguards the operator's future.



**EXECUTIVE BRIEFING** Secure data services for public safety - Which role should TETRA operators have?



## Taking the first step towards the Tetrapol future

IP migration paves the way to public safety broadband. Find out why migrating to IP is such an important step: download this detailed guide.



**GUIDE** Tetrapol IP migration - Ensuring operational efficiency for the next decade



Don't have time for details? Download a quick guide instead:



## 2. PLANNING

Mobile broadband delivered over a hybrid network offers a wealth of new opportunities for public safety organizations and their users, as well as offering a smooth way to introduce broadband and IP services. But how do we get to this new world?

A smooth move towards mobile broadband requires ticking some key boxes. It's especially important to en-

sure that the existing TETRA or Tetrapol networks are in a good shape and will be able to provide high quality services for many years to come.

But PMR evolution is not only a question of technology. There are other things to consider when planning a smooth evolution towards the broadband future.

## Adopting the hybrid network model

Many authorities and public safety organisations would like mobile broadband to be part of their communications. Discover how hybrid networks can help achieve this.



**WHITE-PAPER** Hybrid networks - a flexible way forward



## Planning the introduction of mobile broadband

Pointers for driving and planning the introduction of mobile broadband and mobile apps.



**WHITEPAPER** How to succeed in PMR evolution - the smart way



## Success story: Adopting “5 Steps to Broadband” approach

The Finnish public safety network operator is modernizing the network. They have a strategy with 5 steps which will take them to mission-critical broadband.



### SUCCESS STORY

Finland – Hybrid Network in use



## Tactilon Agnet app brings push-to-talk to smartphones

Niklas Lagerblom introduces the Tactilon Agnet application that lets you use push-to-talk on a smartphone to communicate in a TETRA talk group.



**VIDEO** Tactilon Agnet brings push-to-talk to smart devices



## 3. EXECUTING

Go one step further and learn how new solutions from Airbus Defence and Space can bring benefits to public safety users - today and in the near future.

Many public safety network operators and owners/operators of critical networks have already started on the trusted path to the future. The Finnish public safety network operator is just one example.

Discover who else is reaping the benefits of hybrid solutions. Go to this page: <http://www.securelandcommunications.com/customer-stories/hybrid-solutions>

## Introducing Tactilon Dabat – a smartphone and full TETRA radio in one device

Mika Myllymäki introduces Tactilon Dabat - the first smartphone with a full TETRA radio inside. Use it as a TETRA radio for critical communications.



**VIDEO** A closer look at Tactilon Dabat - A smartphone and a TETRA radio in one device



## Managing priorities in LTE networks

Can public safety apps get more priority in LTE networks than kitty videos? Read this paper and you'll know.



### EXECUTIVE BRIEFING

Managing priorities in LTE networks



Want to learn more about PMR evolution to broadband? Check out these blog posts: <http://www.securelandcommunications.com/blog/topic/tetra-future>

# Tactilon® Agnet

– for TETRA group communication  
in your smartphone

With Tactilon Agnet on your smartphone, you can talk to people who carry a TETRA radio and also with the control room – or send text or status messages.

Outside your TETRA network coverage? Tactilon Agnet can connect you with your TETRA groups even then.



**And there's more:**

check the web page at

[www.securelandcommunications.com/tactilon-agnet](http://www.securelandcommunications.com/tactilon-agnet)