# key touch®

customer magazine
1/2012


# Recipes for success

Keep in touch everywhere

Secured: world's longest oil pipeline

Next-generation emergency response

# WHO'S IN THIS ISSUE?

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

**ANKE STURTZEL** is a member in the Key Touch team in her function as press officer. 11 years ago this German fell in love with Paris where she has lived ever since. Anke loves - in addition to taking photos - to rework old furniture in her spare time.

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**SATU LAMBERG** lives a double life, providing marketing, sales support and Key Touch articles about cutting-edge technology while enjoying a lake-shore rural idyll.Three horses, four cats and a dog keep her and her family busy.

**TIINA SAARISTO** is Editor-in-Chief for Key Touch and has led the team of editors and contributors since early 2003. Tiina lives with her husband, daughter and cat in Helsinki, where she creates quilts and quilted objects.

**TAPIO MÄKINEN** has undertaken photoshoots for Key Touch Magazine and Cassidian. With his photos, Tapio aims to capture the feelings of places, events and people. Tapio has single digit handicap in golf, practises astanga yoga and is often seen cheering at his boys' basketball matches.

**JEAN-MICHEL DUMAZERT** juggles his time between Cassidian, his family, scuba diving and being a local councillor. Since September 2010 he's now added to his packed schedule by contributing to Key Touch as TETRAPOL correspondent.

**JUHANA SANTALAINEN** is focusing on social and environmental issues in the security industry while finishing his Master's Degree in Marketing & International business. In his spare time, he is always on a lookout for an adrenaline rush, mostly through kitesurfing or snowboarding.

**CECILE FONTAINE** likes to express her creativity in marketing. An amateur photographer as well as Lapland and music lover, she is a keen traveller in arctic regions. Cecile also enjoys drawing, playing video games and sharing ideas with different cultures.

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CASSIDIAN

# The communications revolution built on network evolution

**SOLUTIONS** that promote public safety must also make financial sense in today's tough economic times.

Incremental implementation makes full use of existing investments in digital communication systems. Making incremental changes and adding to established solutions can maximise returns.

And it's not just the upfront cost of new equipment that makes it better to reuse existing systems where possible. Personnel need training to handle new technologies, working methods and processes, which might require a complete overhaul if the new solution is being built from scratch. In fact, this could be even more expensive than the initial investment.

In contrast, incremental developments that build on already successful communication systems are far less disruptive. See more on successful incremental development strategies in our articles on emergency response centres (pp 18-19) and IP transmission (p 37).

### Integrated systems support seamless working

Different systems should also work efficiently together, enabling voice and data to move easily between them. The initial effort of integrating systems to work together in this way will typically be more than offset by smoother working in the longer term.

For instance, information only needs to be stored in one place for all the systems to use it. This makes it easier to be sure that everyone is working with the same, up-to-date information, so it improves the quality of public services at the same time as delivering savings for operators.

Integrated systems also help users by making it easier to track down the information they need. In other words, more and better information is available for less effort. Users of the Rakel network in Enköping are already reaping the benefits of better integration (pp 16-17), while a co-ordinated approach is vital when managing major events such as the G20 summit (pp 6-9).

The world is in the grip of a data revolution, which is sweeping through commercial and professional communications systems alike. Systems must be ready to respond, like the Slovak network on pp 28-29. If professional networks can evolve incrementally, the resulting systems will be more effective in both cost and operations.

Jean-Marc Nasr
General Director
Cassidian, Security and Communication Solutions

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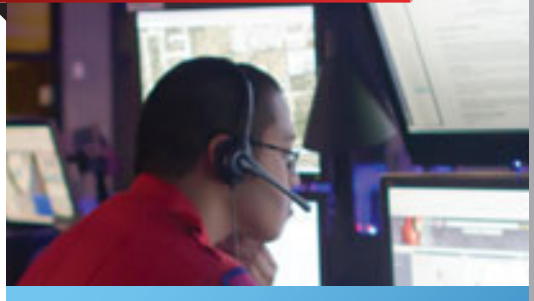

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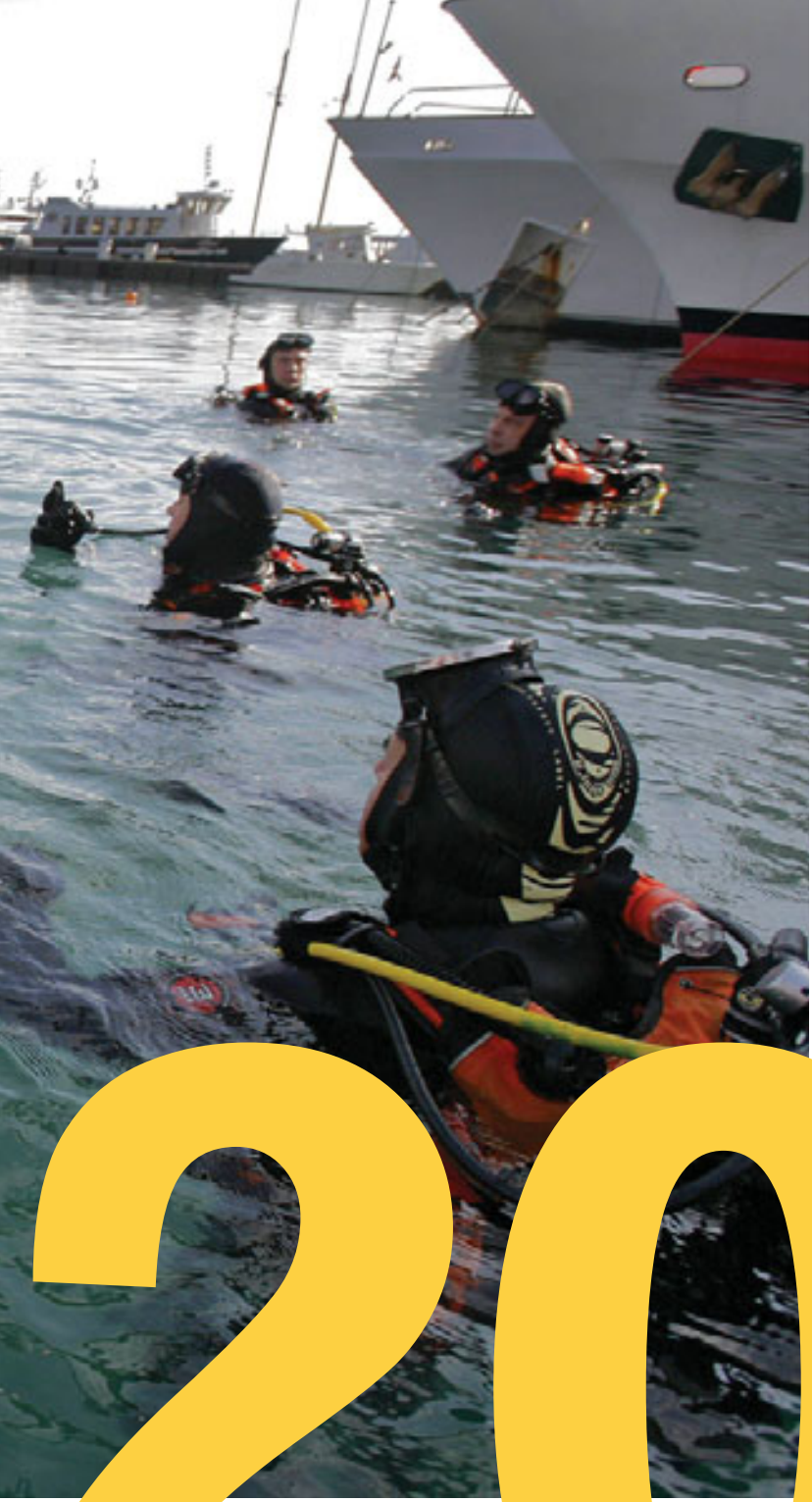


# 20

**Major events of the past provide valuable insight into how security can best be ensured. KeyTouch looks at last year's G20 summit to dig out three key ingredients for success**

When the G20 summit took place in Cannes in November 2011, Cassidian secure communication systems helped to ensure the security of everyone involved.

As host, the French government deployed 12,000 security personnel, including the Police, Gendarmerie, State Security Police Force (CRS), firemen and special services. The success of the summit provided several valuable lessons about the key ingredients needed to get the security of such a high-profile event right.

### Get the organisation right

Getting the organisational structure right is the first ingredient of success. Overall responsibility for the G20 was taken by the regional prefect supported by two units: the intelligence unit and the decision unit. Both units were located in an Operational Command Unit (PCO in French), where all the information systems of the different user groups were centralised.

In all, three networks were used for this event. The INPT network was complemented by a fully interconnected overlay network, both covering the same ter-




**The three key ingredients for securing major events:**

- Get the organisational structure sorted out, with a clear division of responsibilities between the participating organisations.
- Prepare and test ahead of time to provide trouble-free communications during the live event
- Use effective interconnection between communication networks and technologies to make sure that different agencies can work effectively as a team

ritory. This combined network was used by police, emergency medics, the army and fire services and was used for technical management, tactical forces management and operational command. The RUBIS network and TOPAZE networks were used by the Gendarmerie, CRS (riot control forces and general reserve of the French National Police) and naval joint forces across all the operational zones, including the summit, its immediate vicinity, and strategic roads.

INPT and RUBIS are Cassidian networks using TETRAPOL that serves the police and the Gendarmerie, while TOPAZE is a tactical network based on a Milicor® system developed by Cassidian.

With such a complex set-up and so many users, it was a full-time job keeping everything running smoothly, but coverage – including indoor, outdoor and coastal areas - remained intact throughout the G20 summit.

The G20 summit gathered together representatives of 85% of the world's business and of two thirds of the world population.

### The importance of good preparation

The next ingredient is that preparation is vital, with plenty of test-

# G20

ing needed in advance to ensure interoperability and smooth operations during the live event.

In the case of the G20, preparations for the November meeting started as early as the end of May, once the success of the G8 summit in Deauville had proven the efficiency of the chosen network architecture. Installation and commissioning were scheduled for September, with testing running during late September and October 2011. The test results allowed the organisers to tune the ultimate solution to deliver optimised radio coverage and system behaviour.

**Integrated communications for everyone**

Everyone needs to communicate effectively, which means that different communication technologies and networks may be called on to work together. In France, this meant connecting all the involved networks INPT, RUBIS and TOPAZE.

Effective interconnection ensured that UHF (Ultra High Frequency) and the VHF (Very High Frequency) terminals could work together across the networks. It also required the integration of a pedestrian geolocalisation application – the Plantcor™ Operations Manager 100. This helped the security organisations co-ordinate their missions by allowing the rapid creation of remote, temporary control rooms and giving dispatchers a clear picture of the locations, status and active TETRAPOL group communications among the mobile field units.

Т-ХЕЛПЕР
ГРУППА КОМПАНИЙ

# Russian resort prepares for world ski showcase

**As the Rosa Khutor Alpine Resort gears up to host the alpine skiing at the 2014 Winter Games, the Russian resort has commissioned a state-of-the-art communications system to help ensure the preparations run smoothly.**

Thermally insulated containers protect the base stations in extreme conditions.



The Rosa Khutor Alpine Resort is located in Krasnaya Polyana in the Northern Caucasus in Russia, close to the Black Sea. The resort is set to receive a major boost to its profile by becoming one of the major projects of the Sochi 2014 Games. Some 43 hectares of sport tracks will reach nine kilometres in total in order to meet the requirements of the International Federation of Mountain Skiing (FIS).

The resort has therefore been equipped with a state-of-the-art Claricor® TETRA system. Cassidian's value-added reseller, T-Helper Svyaz LLC, was commissioned to implement the system.

### First tests done

The first phase of the implementation was finalised in February 2011, just in time to host the FIS Europe Cup competition. These games were attended by more than 160 athletes from countries including Austria, France, Germany, Italy, Russia and Switzerland, along with 100 officials who tested the slopes and facilities of Rosa Khutor. These tests enabled the Sochi 2014 organising committee to check the technical readiness of the facility for international competitions, as well as the efficiency of the resort's staff and systems.

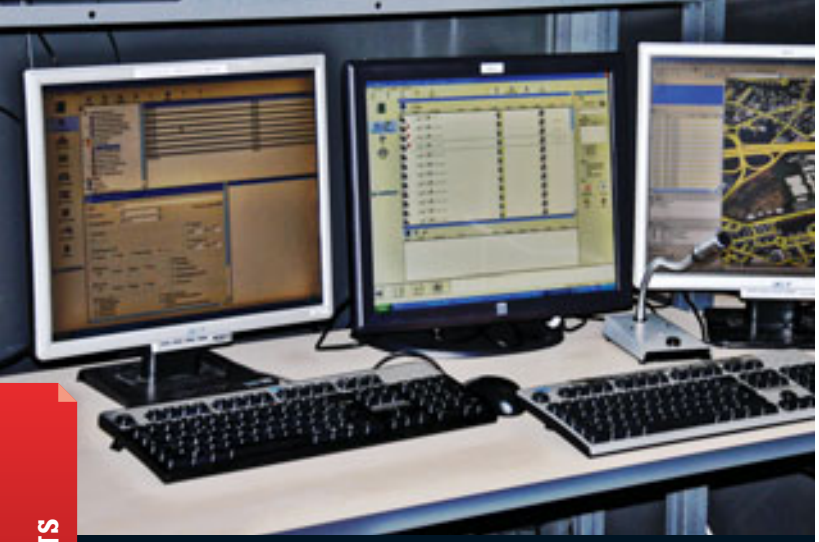
During these events the Claricor system provided communication for rescuers, start-finish personnel, security teams, judges, slope personnel, medical staff and TV broadcast teams, among others. The next challenge for the facilities will be in February 2012 when the FIS World Cup in men's downhill and a super combined competition will take place in Rosa Khutor.

### Network coverage for difficult landscape

The Claricor system consists of a switch, four TB3 base stations and an operator station, as well as around 250 handportable and mobile radios from Cassidian. Specific climatic conditions and the complexity of Rosa Khutor's route profiles both affected the solutions used in the construction of the system.

Base station locations had to provide radio coverage throughout the challenging landscape, where rope-ways, ski patrols and maintenance, as well as security and other services, are dispersed across the mountain area at heights ranging from 940 to 2,400 metres. After careful inspection and design, T-Helper's specialists came up with thermally insulated modular container solutions to protect the base stations, antennas and feeders in the extreme conditions. This successful set-up now provides full coverage for all slopes and enables communication and cooperation between the key facilities and locations across the resort.

Aleksey Tomashevski (on the left) and Alexander Demidov from T-Helper implemented the Claricor system at Rosa Khutor.



# Claricor® users get advantages fast

Claricor® is an all-IP TETRA solution, suited for small and medium sized networks. It combines a distributed IP architecture of servers and routers with the familiar TB3-series base stations and easy-to-use radios from Cassidian.

Claricor processes mobility data in a distributed way at each radio site. The traditional switch is replaced by a set of soft switches and routers that distribute voice and data packets to the appropriate destinations. In the distributed IP architecture, the main reference database is copied to local databases at each radio site. This means that in case of one site experiencing problems, the rest of the network will continue working normally.

**Coverage engines included**

Claricor is an excellent "entry level" TETRA solution, and it relies on the same TB3-series base stations as the larger-scale networks. Claricor users experience the same superior capacity, coverage and functionality that has traditionally been available only to users of bigger networks. Claricor users can also benefit from the easy-to-use, feature-rich radio products provided by Cassidian.

**UP**

Preparedness

Tablet computers

Number of Key Touch subscribers

Downshifting

Multi-purpose solutions

**DOWN**

Delays

Power outages

Mission critical video equals TV

Extravagance

Jingle bells

# Anatomy of an **ambulance**

**Getting the right initial treatment can mean the difference between life and death for trauma victims. That's why every well-equipped ambulance includes a wide variety of equipment to secure the safety of patients - including mission-critical radio communications.**

Paramedics need the right tools to support them as they work on patients in a vehicle with very limited space. It's a stressful situation that demands intuitive and easy to use tools. So let's take a closer look at the anatomy of a modern ambulance.

### Basic protection

Patients and paramedics are at risk of injury from riding in a fast-moving ambulance, so they need to have good injury prevention equipment in easy reach, such as restraining straps and seatbelts, helmets, fire extinguishers, cervical collars, head and extremity immobilization devices, as well as backboards.

Ambulances need to be highly visible to minimize traffic accidents and most are brightly painted in addition to having sirens and lights. Reflective clothes,

flares and traffic signalling devices are among the most important onboard equipment.

The vehicle itself must be powerful and reliable enough to reach people in distress in the most difficult conditions, such as extreme bad weather.

### Mobile first-aid

Ambulances can't compete with the range of medical equipment found in a hospital, but they cram a lot into the space.

Basic medical gear includes stethoscopes, defibrillators, scissors, tapes, oxygen cylinders, breathing masks, cardiac monitors and oral and nasal airways (incubators). Above all, however, their know-how makes the paramedics the most important medical resource on board any ambulance.

## TETRA radios help shave minutes off response times

### Seamless communication

Reliable and swift communication with other emergency services, such as doctors and other agencies is vital for daily ambulance operations.

Paramedics often need to reach people inside buildings, so their radio terminals need to remain in touch even in difficult-to-reach spots indoors. In addition to portable terminals, there is a possibility to install a mobile gateway radio that will further aid in maintaining a robust link between paramedics and their headquarters.

TETRA digital radios help ambulance crews increase efficiency, shaving minutes off typical re-


sponse times and sending vital information back to the headquarters or ahead to the waiting trauma team.

New digital radios also have cost and space benefits, since one TETRA radio replaces an old analogue radio, pager and mobile phone.

Secure communications boost the efficiency and safety of hard-pressed ambulance crews.



## Saving lives with a first-aid solution from Elektro-Arola

Finnish ambulance manufacturers are relying on PC-based Status and navigation (SNP) user-interface programs by Elektro-Arola to help ambulance crews stay connected as they focus on their key jobs. Hundreds of emergency systems are already in use throughout the country.

The user-interface is connected to a TETRA radio from Cassidian and it manages status, SMS and vehicle location updates while keeping data consumption to a minimum. Emergency response centers can also send coordinates and directions directly to an in-vehicle navigation system integrated in the SNP user-interface. This saves precious time when every second can mean the difference between life and death.

The same SNP software controls different functions of the emergency vehicle, such as the sirens and flashes, via a CANbus channel. This solution has made it possible to swap a range of bulky hardware for a compact touch screen. This has had major cost implications and left more room for other vital hardware. Finally, the solution has made data and voice management more simple and intuitive. Similar solutions are provided by Cassidian´s local partners in other countries as well.

Elektro-Arola Oy develops and manufactures alert and communication systems for professional use. They specialize in TETRA, PMR, IP and GPS technology.

ELEKTROAROLA

www.elektro-arola.fi

# RAKEL enables renewed cooperation between Enköping safety services

**Improved cooperation between the different agencies responsible for public safety was the chief driver for the deployment of the Rakel communications network in Enköping.**

Police and ambulance crews were on-board with the use of the Rakel network in public safety applications across the Enköping municipality from day one. Rakel is the Swedish national communications network. The local authority in Enköping takes its responsibility for the safety of

## An all-round approach to public safety

"Full-circle security includes sharing digital information, interoperability and integrated systems. It makes it possible for us to handle a growing amount of information."

"The key driver is the need to share data. This need to share information means that we have to use dedicated networks flexibly."

"It recognises the importance of using data and voice together. It's also about integrating organisations together in common information centres, where they share only the required data while other aspects of their operations remain private."


residents extremely seriously, according to Andreas Doering, who is the local fire chief and the officer responsible for cooperation and communications between the Enköping rescue services.

He sees Rakel as having the biggest impact when the local agencies face major incidents, so the planned pool of users will extend beyond the police and rescue services to include community leaders, technical bodies and utilities.

Traffic accidents are always a possibility in Enköping, which is criss-crossed by major roads and railways. Andreas therefore uses a hypothetical traffic incident to illustrate how important a robust and well-functioning radio communications system is to the area.

### Overcoming congestion

"We don't trust mobile telephones," he says. "We only need to have a traffic jam on any of our roads and the mobile communications network becomes overloaded. Everyone is on the phone to let others know they will be late."

"Rakel is a must for cooperation in these situations. We have our talk groups and can speak without interruption. Everyone involved gets a situational picture quickly and can plan and allocate their resources."

He also highlights coverage as another big benefit: "We can reach each other even nationally if we need to. This is revolutionary. Also we can send voice messages, data, position data, and so on - all on one system. We have had to use many different systems before."

Rakel is now well established across the country, but it has taken until now for Enköping to allocate the necessary funding to make the switch. Andreas now expects the authorities to complete the swap by 2013. It joins 13 other municipalities and rescue services that have recently jointed Rakel, including Arvidsjaur, Kalix, Kiruna, Luleå, Storuman and the rescue services in Arjeplogs. Today the network has around 40,000 subscribers that represent around 250 organisations, 180 of which are municipalities and rescue services.

"Full-circle security means sharing information between organisations and that means the effective integration of systems and solutions."

"Real information sharing is about more than just voice. It demands full collaboration between organisations."

**The latest emergency response systems target full-circle security, promoting the free flow of information between the public, the control centre and officers in the field. Renewing and upgrading emergency response systems to achieve that vision is extremely complex, so Key Touch takes a look at how to get it right.**

# **Next-generation emergency response** – 112 systems for 2012 and beyond

Whether it's 112, 911 or 999, calling the emergency services today should elicit a more effective response than ever before, thanks to the latest systems that promote an end-to-end response using both voice and data. However, upgrading older emergency response systems is a huge challenge, calling for full interoperability between a host of different information systems and databases.

### Seven key considerations

There are seven factors to bear in mind to ensure that any new system takes advantage of the next generation of possibilities.

**Full-circle security.** Systems must work together to enable inter-operability and to share digital information. The key is to optimise the complete system, rather than focusing on a single part, such as the Computer Aided Dispatching (CAD) tool.

**Consider radio.** The emergency response centre must be able to speak with the people in the field, but integration goes barely half way if it stops at voice. The best new 112 systems take advantage



of a range of information as a natural extension of the existing radio network services. In addition, the system should be able to control the radio network dynamically to optimise the service.

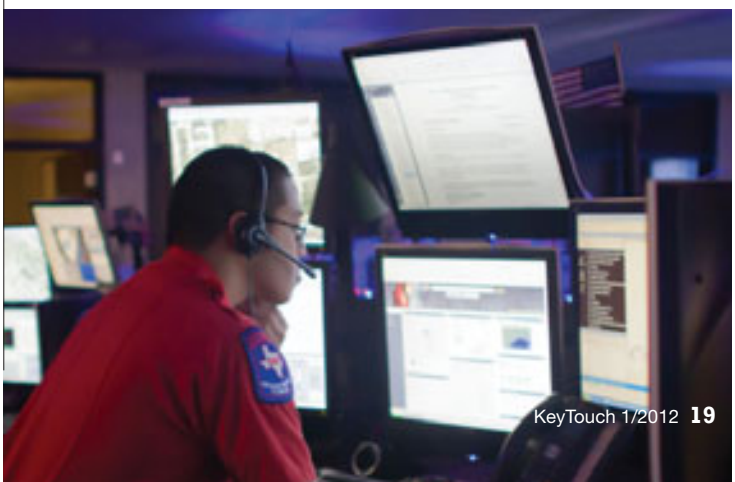
**Flexibility.** The system needs to adopt the fastest data transmission method intelligently when available, but also automatically scale down to narrowband networks if necessary. For example, a major disaster may cause the loss of fixed transmission, but it's vital that the 112 system continues to operate in some form.

**Incremental investment, incremental approach.** In many cases, there is a legacy CAD system in use but it's often only the call-taking part that's renewed. In that case it's beneficial to select a vendor with open interfaces and a modular system where different component parts can be introduced separately. When call taking and CAD are upgraded, they are always upgraded one at a time, so the previous system needs to work together with the new system.

**Unified access to information services.** This might mean only one password is needed to achieve access according to the user profile's access rights. In multi-agency operations, the police, medical and fire and rescue services may share a common system, and each party has special needs and limitations on what information can be accessed and shared with other users. Some CAD solutions/platforms do not provide sufficient flexibility to suit all the potential users.

**Cyber security.** The provider of the new 112 system should be knowledgeable in cyber security. When systems are based on IP connections, security is even more crucial. The vendor needs to understand security issues and must be able to provide training for the emergency personnel.

**Remote maintainability.** If there's a malfunction in one of the call-taking centres, maintenance personnel should be able to address the problem remotely and before users even notice anything is wrong. Site visits are time-consuming and expensive, so the system should be designed with remote operations and maintenance in mind.



**Public safety networks typically remain standing when public cellular networks fail, ensuring that those responsible for sorting everything out can get on with the clear up operation - whatever the weather.**

# Carry on communicating

The most basic advantage of a dedicated network for public safety services is the guaranteed high availability of radio communications in an emergency. The authorities can still communicate when commercial public networks may be damaged, congested or vandalised. So how do these communications systems cope after heavy weather, when power disruptions and extreme rain threaten to interrupt transmissions?

Redundancy is the most important feature for maintaining robust communication should network damage be caused from, say, power failures, broken links or submerged sites.

TETRA's built-in redundancy should guarantee continued operation in the case of unavailable radio cells, network nodes and sites. For example, a TETRA base station can continue to operate in fallback mode, even if it is cut off from the rest of the network. This effectively enables it to continue providing local cover.

### Back up links, back up power

Typical TETRA networks also deploy at least two alternative routes from each base station to the switch. So if one link fails the transmission will still get through.

Even if a storm cuts off the electricity supply to base stations, an uninterruptable power supply (UPS) and/or backup generator can keep the systems going.

In the Rakel network in Sweden, for example, diesel-powered reserve aggregates have been set up on many base station sites. The goal is to equip around half of the network's base stations with diesel backup, focusing on those in key positions. The diesel units start automatically if there's a power failure. This is in addition to battery backup on all the Rakel installations, which can only keep the network going for around two hours following a power outage. The diesel back-up removes this limitation.


Pelastustie
Fire route
Räddningsväg

# INSTANT INFORMATION CAN SAVE LIVES

**Whether it's an approaching tsunami, a tornado or a leaking oil pipeline, emergency notification technology helps deliver vital information out to everyone who needs it. Key Touch looks at how Cassidian's solutions are protecting people around the world.**


People need information fast in a crisis, especially when it can mean the difference between life and death. The key to managing an emergency effectively is therefore the simultaneous dissemination of information across a variety of platforms, and that's where emergency notification systems come in.

Public safety organisations such as the fire services and police departments are the main users of emergency notification technology, using it to notify people of everything from an approaching fire or flood to mundane school closures.

## Flexibility is key

"Our systems use a common front end to enable users to easily define what message they want to deliver, how they want to deliver it, and to use the tool the way they want," says Mike Adams, Product Area Business Manager at Cassidian Communications. "For example, if there's a tornado bearing down on a given area, a simple 'blast' notification is sent to as many people as possible as quickly as possible: 'Take shelter!' But, if there's a fire incident at a waste treatment plant, you may want three firefighters, two security people, a public relations person – a much more precise number of recipients."

Beyond public safety, the energy sector and banking and finance industries are also embracing the technology. These businesses use the same systems for disaster recovery and business continuity, as well as for customer contact. They may also use the solutions to inform their own staff about fast-changing situations.

## A notification ecosystem

Historically, emergency notification has focused on the phone, with later additions including faxing, alphanumeric paging, email and SMS texting. Today, the next step forward in telephonic notification in Europe is to establish partnerships with mobile


phone providers that could enable governments to send messages to all people in a particular area at once.

"Our systems enable users to easily define what message they want to deliver," says Mike Adams from Cassidian Communications

Social media is also becoming more important, requiring the ability to post on Facebook or Twitter, or other social media networks. Push messages could also appear as pop-ups on computer screens and IP-connected phones.

"You cannot rely on any one communication methodology to get a message out that is truly an emergency," says Adams. It's therefore important not to discard old notification technologies, and many European countries are looking to integrate alerting capabilities within their longstanding loudspeaker and siren systems.

### Established technology

Unfortunately, it's often only the impact of a disaster that makes people aware of the need for emergency notification technology, but there is a growing number of systems now in place already protecting people. For instance, the United Nations Atomic Energy Commission (UNAEC), based in Vienna, Austria, is responsible for monitoring the use of nuclear materials around the world. However, following last year's earthquake and tsunami in northern Japan, UNAEC used its emergency notification system to send out hourly updates to all its member countries so that they could ensure that updated facts were being sent to governments and other nuclear regulatory agencies across the globe.

Meanwhile, several law enforcement agencies in California and Oregon used the same technology to alert local residents to the ripple effect of the tsunami, which affected some coastal communities.

### Looking ahead

Customers for emergency notification systems range from small municipalities to governments looking to contact tens of millions of people. Solutions therefore need to be truly scalable. "As different as these environments and people are, they all have a vested interest in and share a strong commitment to the protection of people," says Adams.

# Keep in touch **everywhere**

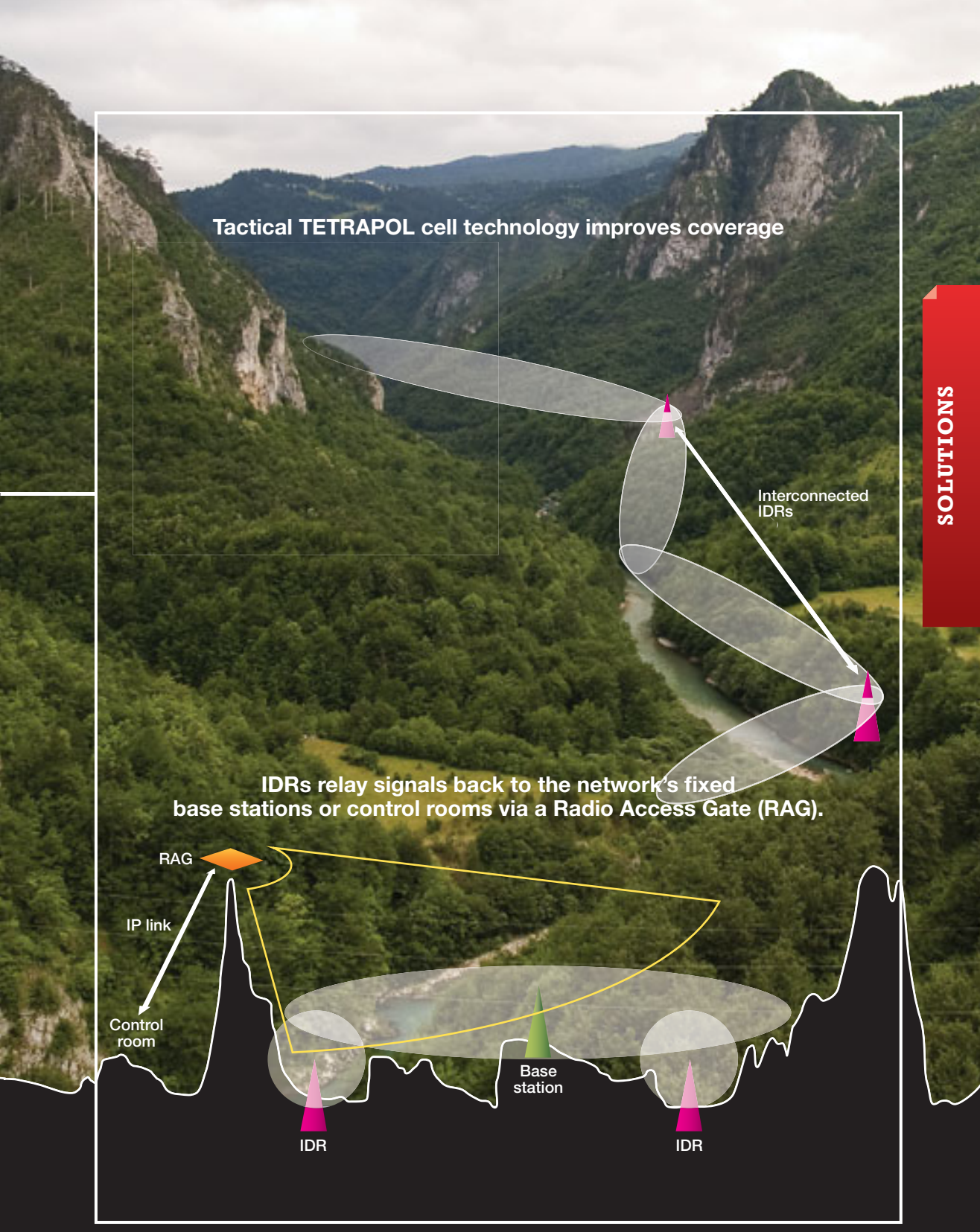
**The French fire and rescue services must be ready to spring into action anywhere, and the fast deployment of tactical cells from Cassidian can ensure that they're never out of touch when they do. In addition, Radio Access Gates can be used to ensure that network contact is maintained, even when a base station is out of action.**

The new solutions were developed in response to demand from the French fire and rescue service (SDIS), which was experiencing difficulties keeping in touch at all times because of the high mountains and deep gorges in some parts of the country.

For example, the SDIS is often called on to rescue water sports enthusiasts who get into trouble in the deep gorges of the Verdon, Tarn and Ardèche, where the existing radio network struggles to provide coverage. The SDIS of the Ardèche region thus decided to experiment with tactical TETRAPOL cell technology from Cassidian to improve coverage during rescue operations. Success in these trials is expected to generate a lot of interest in other areas of France that experience similar challenges, such as Alpes de Haute Provence or Tarn.

The cells are deployed using independent digital repeaters (IDRs), which relay signals back to the network's fixed base stations or control rooms via a Radio Access Gate (RAG). IDRs can provide voice and data, so that commanders can use geo-localisation to keep track of field officers from both the local and regional headquarters, thanks to a new data feature in the latest version of the RAG.

RAG backup can also help the SDIS to maintain coverage when one of its base stations fails for any reason. The service will deploy several RAGs at the highest points throughout the department, so they can "see" over a wide area. Features included in the new-generation RAG units enable them to choose which base stations or IDRs they communicate with, effectively providing the control centre with coverage in areas that might otherwise be experiencing problems.


Tactical TETRAPOL cell technology improves coverage
Interconnected IDRs
IDRs relay signals back to the network's fixed base stations or control rooms via a Radio Access Gate (RAG).
RAG
IP link
Control room
Base station
IDR
IDR

# Prepare for take-off with TETRAPOL for airports

**The latest TETRAPOL release has special airport-focused features and is finding favour also in other transport sectors and industries.**

Some TETRAPOL releases aim to meet the needs of specific industries, and the airport-focused features in the latest V35_08 version are also attracting users across Germany. These features already available in some releases and updated for V35_08 are appreciated by Hamburg bus and metro systems, the Darmstadt bus system and industrial sites including BMW and Arcelor Mitall, in addition to Zurich and Berlin airports.

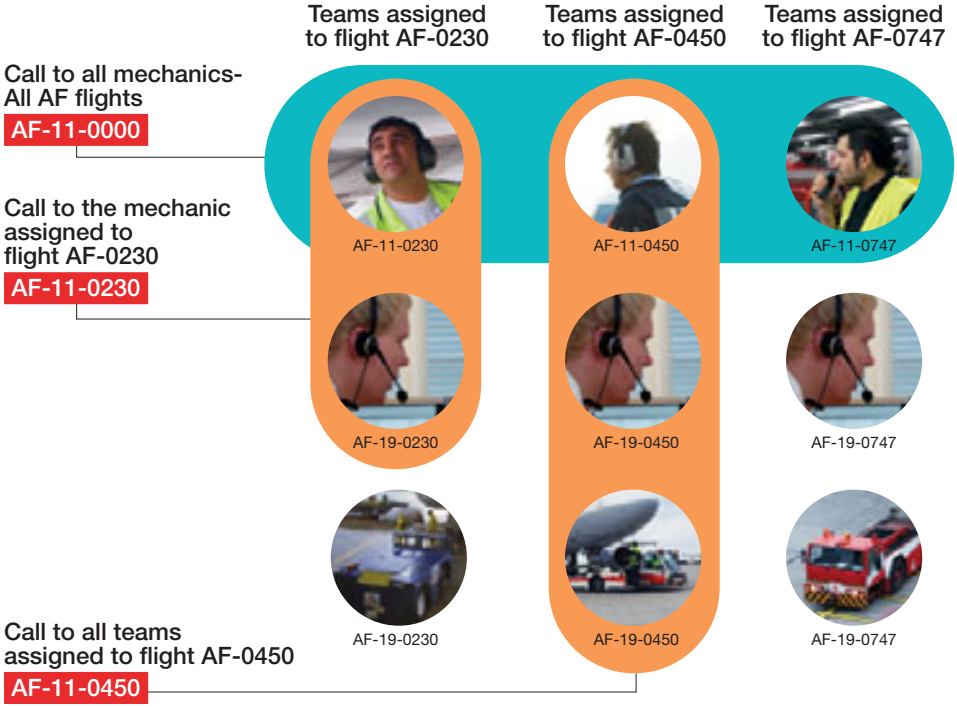
The two stand-out functions for airports are: Object Call and Tower Communication.

## Object Call

Object Call offers trunked group communication between local subscribers in a specific geographical area who are all associated with a given task or "object" for a limited time. The users themselves manually enter the tasks in which they want to participate, based on the jobs assigned to them during the day and without the intervention of technical or tactical operators.

All the users who choose the same task (entity, task and number) automatically enter the same talk group when the Object Call communication is activated and exit when the communication is disabled.

An Object Call may be associated, for example, with a particular task – such as preparing a plane for its next flight - for a specific entity - such as an airline company - so that all the participants in this task can communicate with each other.



**Tower Communication**

Tower Communication is a high-priority conference call used by operators in airport control towers to manage the landing and take-off runways. For example, they may need to evacuate the runway using a tractor or "follow me" vehicle if an airplane is preparing to land.

The radio user activates Tower Communication if he or she has to work on the runway approaches. It keeps them informed about any runway activity that they need to be aware of.

Once activated, a tower-shaped symbol appears on the terminal screen. When the control tower presses the push-to-talk (PTT) key, all the terminals that have activated Tower Communication automatically hear a short ringtone before being connected. They may then reply if necessary, although users cannot directly use their PTT to activate Tower Communication independently. They must wait until the control tower has activated the function in order to reply to it. If the function is inactive, users may transmit a speak request to the control tower using a predefined SMS sent using a long press on a key. The tower personnel may then choose to initiate Tower Communication. Tower Communication closes again automatically after a few seconds of inactivity.

Adopting these two functionalities requires specific radio terminal software and may involve some adjustments in the system side. For example, a special beep may be added or removed, or specific interface adjustments or keyboard shortcuts may be needed. In some cases, users may need to memorise a sequence of keys.



# TETRAPOL to cover Berlin's new airport

Cassidian has won the digital radio contract for the new Berlin Brandenburg Airport Willy Brandt. The project will extend Cassidian's existing TETRAPOL network to cover the German capital's new hub, which is currently the largest airport project in Europe.

Berlin's established Tegel and Schönefeld airports are already Cassidian TETRAPOL network customers and have been using the technology since 2002. Under the new deal, additional base stations will be added to the existing network switch to provide outdoor coverage for the Berlin Brandenburg facility.

In addition, Berlin Airports has also commissioned Cassidian to provide an indoor radio system for the new airport's TETRAPOL network and to link the airport communications with those of Germany's leading public security organisation, BOS, which uses a TETRA network.

The indoor radio system will mainly serve the newly built passenger terminal including Pier Nord (North Pier) and Pier Süd (South Pier) as well as other airport buildings such as the fire station, the tower and the ground handling service facilities.

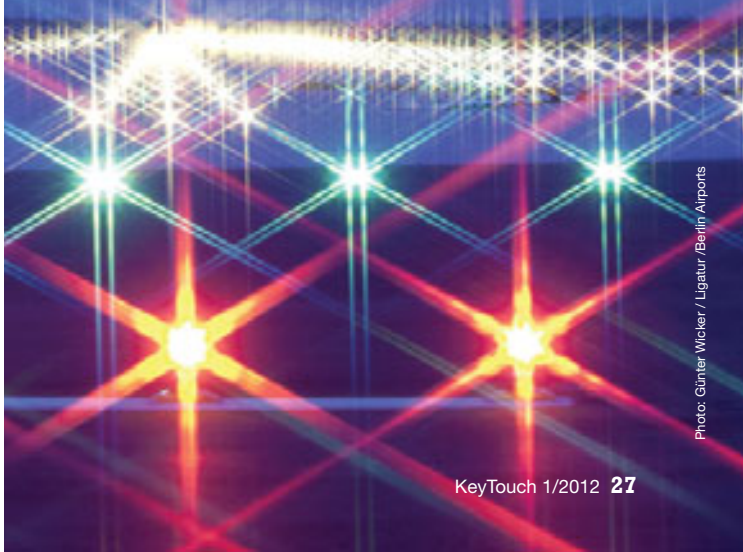


Photo: Günter Wicker / Ligatur /Berlin Airports


POLICIA

# Slovakia opts for major network upgrade

Slovakia's nationwide security network is being upgraded with the latest software release for TETRAPOL – the V35_08. The Slovak Republic Ministry of the Interior (MoI) signed the deal in December 2011 and the upgrade is scheduled for completion by September 2012. Cassidian is supplying the technology with support from Slovak company RCTT.

The network, SITNO, has been in operation since October 2008. The new upgrade will take place in eight stages, with each covering a different region of the country.

### Boosting capacity

The project will increase the maximum number of radio users in each regional network from 12,500 to 20,000, double the number of autonomous organisations (fleets) in the network from ten to 20 and raise the number of talkgroups available on each terminal at any time from 20 to 70. The total number of operational groups defined in the network will rise from 1,000 to 3,000. It will also introduce the ability for users to scan simultaneously for network communications and communications in direct mode – a feature known as Dual Watch.

### Into the future

With eight regional networks and about 100 base stations in all, the SITNO network provides secure radio communications for almost 12,000 users in the Slovak fire service, police force and emergency medical service. The upgrade will enable the network to develop in future and expand its capabilities, such as automatic vehicle and personnel location services. The Slovak police has developed a novel text message-based data query that provides remote access to the stolen car register.

The MoI is already looking even further ahead and exploring the possibility of broadband over SITNO. The authority also plans to make SITNO the digital radio-based backbone of a new National Emergency Response System, which will be developed over the next few years.

# Key Touch
# 10 years ago

**Forward thinkers in China featured prominently in TETRA Touch (now called Key Touch), issue 1-2002.**


### Hong Kong – the safest city in the world

*"The Hong Kong police force has implemented advanced TETRA applications. [The police service] won an award at the TETRA World Congress in 2001 in Nice for the Most Innovative TETRA Service Award for the automatic vessel location and messaging system for the Marine Police."*

### Chinese-language SDS text messaging continues TETRA expansion

*"The Water Conservancy Bureau in the city of Tianjin became the first to use the TETRA Short Data Service (SDS) with a Chinese character set."*

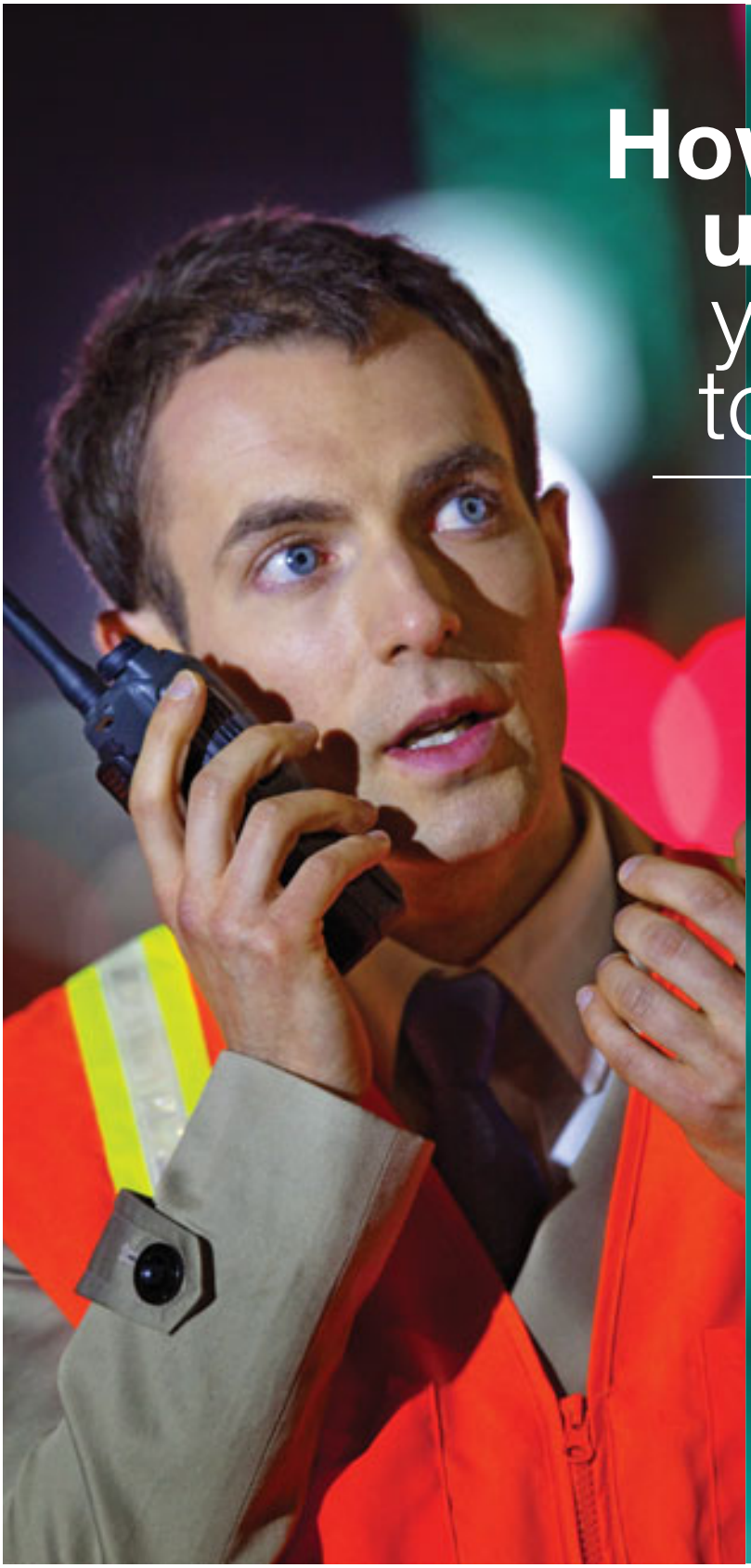

### Help is just a button away

Emergency calls on the radio were also new, with the back cover of the issue giving centre stage to the new functionality.


Inspector X is a high-ranking investigating officer in a national police narcotics squad, and he has received a tip off about a suspect in a city a thousand kilometres to the north of his office. Luckily, the police and emergency services in his country have access to a TETRA network.

When a suspect pulls a weapon, the officer needs back-up fast, and that means contacting local colleagues.

*"Our inspector is forced to resort to the red button of the Emergency Call function on his handset. In a less advanced system, his call would probably be directed back to his headquarters, a thousand kilometres away. His TETRA handset, on the other hand, means that his call can be directed immediately to local back-up resources."*



# How many users do you want to reach?



**A question that Key Touch is often asked is, how many people could I reach with a single group call?**

The answer: It's **entirely up to you!**

For example, to reach every user, you need a talk group that includes every user as a member. To talk to everyone, then, just select that group, press the PTT and talk to them all. Cassidian's TETRA system has no limit on the size of a talk group.

To make an important announcement, a person with sufficient rights could also make a pre-emptive call to everyone. The call would be heard on everyone's radio, even if they were engaged in another, lower priority call.

What's more, in Cassidian's TETRA networks, radios and dispatcher stations can send SDS (text) messages to a talk group, so an important text message can be sent to every radio terminal in the system – all at once.

# Spectrum changes spark fresh interest in TETRA in Australia

NEWS

Interest in TETRA by Australian organisations is rising following recent changes in the country's frequency spectrum allocation system, which now supports the TETRA standard's defined duplex spacing and spectrum. Only modified, proprietary TETRA solutions could access 400-MHz frequencies in Australia before the change.

Australia is unique in having vast areas with very sparse or no population, yet with significant natural resources. The oil, gas and mining companies operating in these areas are forced to establish their own infrastructure for operations and for the hundreds of kilometres of railway lines that deliver their products to the coast. These companies are now considering TETRA for its ability to provide high quality voice and very spectrum-efficient data services over a wide-area.

TETRA is also attracting a lot of interest in the Australian transport segment following the regulatory changes.

Much of the increased interest was in evidence at Australia's premier two-way radio showcase, Radio Comms Connect 2011, which took place in Melbourne in December, with an entire conference stream dedicated to TETRA. Attracting 700 delegates, the event included major players such as dealers, consultants and end users from the public sector, utilities and enterprise organisations.



TCCA
TETRA + Critical Communications Association

# NAME

**Phil Godfrey, chairman of the newly renamed TETRA + Critical Communications Association, explains the reasons behind the change of identity**

The world is inexorably turning to broadband. This behavioural shift in the consumer market is being reflected in the growing interest in mobile broadband from within the critical communications industry – public safety professionals in the police, fire and ambulance services, and users in many other business and commercial sectors worldwide.

Therefore, we have taken the decision to broaden the scope of the Association so that it is not just looking at TETRA voice and data

# CHANGE reflects broader critical communications agenda

services, but can look forward to other, emerging technologies. Mobile broadband is the most important of these. For that reason, we have changed the name of the organisation to become the TETRA + Critical Communications Association.

### Mobile broadband focus

TETRA has been a phenomenal success around the world as a voice service, and is now in 125 countries. It was specifically designed to meet the needs of critical communications users for voice services, and TETRA Release 2 with TEDS provides critical communications data capability. This will be very important for at least the next decade, but we need to make sure that we have a strategy for the future that provides for broadband services.

There are user communities that aren't currently using TETRA but may also be looking for harmonised solutions for critical broadband – Tetrapol users for example. We would like to be able to meet their future needs.

### Continuing support for TETRA

Our name change does not mean there will be any less focus on TETRA. The TCCA will continue develop and support the TETRA IOP (interoperability) process, continue to run events that focus on TETRA, and continue to promote the technology around the world for all users who rely on critical communications – but we also want to ensure that we encourage the development of standards and solutions that will meet the future needs of these users.

Commercial networks – GSM/3G – have significant limitations in terms of both coverage and resilience and 4G services will likely be the same. Services like the police, fire and ambulance can't guarantee that a major incident will happen within an area with a strong 3G signal. Industries such as the utilities, oil and gas, mining and transportation, need reliable communications to protect their personnel and their business in remote areas that are not covered by commercial networks. These users need dedicated networks of their own.

The TCCA is looking to stimulate, within professional standards bodies such as ETSI and 3GPP, the creation of standards, or the modification of existing standards, to provide a broadband solution for these types of users.

### The spectrum challenge

Spectrum availability is obviously imperative. We are working with Public Safety Communications Europe to lobby the European Commission to find harmonised spectrum across Europe. This is a significant start. The latest version of the Commission's Radio Spectrum Policy Programme (RSPP) now includes a requirement to provide spectrum for PPDR (public protection and disaster relief) use, and this is a major step forward. However, spectrum is still allocated on a national basis and we have much work to do to lobby individual regulators.

One of the reasons that TETRA is such a worldwide success is because we succeeded in creating a highly competitive market – because we had a harmonised technology in harmonised spectrum. That is our ambition for the TCCA: to try to create a single mobile broadband technology for critical communications worldwide.

# Guangzhou hosts day of lessons from the Asian Games

**China is looking forward to become the greatest TETRA market in the world, and the Guangzhou Municipal Office of Information (GMOI) recently hosted a TETRA Day to share the lessons learnt from the Asian Games in November 2010.**

The Guangzhou TETRA Day attracted participants from across China to find out more about TETRA. All the presentations reflected an overarching theme of 'trust'. For example, the keynote speech from Mr Wang Qimin, the deputy Director of GMOI, highlighted the need for trust to be earned and that it was the success of the Beijing Summer games in 2008 that enables the organisers of the Asian Games two years later to be confident that TETRA technology could provide the secure communications they needed. He also stressed that trust in the Cassidian team played a crucial role.

Guangzhou was very ambitious with its plans for a TETRA network roll-out. Within four months the network was put in place and ready to securely support 45,000 users from various authorities, games organisers and utilities over the shared infrastructure.

Sharing a TETRA network enables far better coverage and higher capacity per base station than any single organisation could afford or spectrum availability would enable. As one speaker put it "Once trust is there, then a shared TETRA network is simply wise, efficient and safe".

## Asian Games in numbers:

**15,000** athletes **6,300** technical officials **45** participating countries

**10,000** media people **49** competition venues

**26** non-competition venues **42** training venues **200** TB3 base stations

**2** DXTip switches **45,000** radio subscribers

**2** Network Management Systems more than **200** dispatcher work stations

**2.2 million** calls from the radio network during the opening day

Network rolled out **4** months after contract signature

# Rzeszow airport selected **TETRA radios from Cassidian**

Rzeszow international airport in Poland has selected TETRA radios from Cassidian to be used for the airport personnel's communication. The contract includes a delivery of 136 radios consisting of standard and intrinsically safe handportable radios, vehicle mounted radios and fixed radios.

# Greetings from the **Rakel Day 2012**

The annual Rakel Day – Rakeldagen in Swedish – took place at the Stockholmsmässan in Älvsjö on the 25th of January 2012. Rakel Day was organised by MSB, the Swedish Civil Contingencies Agency.

Nearly 1000 people enjoyed the informative presentations and workstreams that handled the national, regional, and local leven plans for the use of the Rakel radio network for the purpose of improved co-operation. In addition, more than 20 companies presented their solutions at the exhibition area.


Helena Lindberg and Stefan Kvarnerås from MSB spoke on the status and success factors of the Rakel network

# GET READY FOR IP

TBCi unit

**As professional communications networks get set to follow commercial networks down the road of Internet Protocol (IP)-based data services, now is the time to ensure that network elements deployed in the field are ready to make the transition.**

Adopting IP transmission enables a range of new services and promises to drive down the cost of delivering them. TETRA network operators can protect their investments and prepare for all-IP today thanks to systems that are already future-proofed for fast data services. Operators can minimise any disruption by upgrading their base stations right away with TBCi units, which then enables them to switch on IP transmission whenever they want.

### Choose your pace

When base stations are equipped with TBCi units, operators can adopt IP transmission at their own pace. TETRA system software release 6.5 and higher will allow the use of native IP transmission between base stations and switches. What's more, the same network can combine IP and traditional E1 transmission, so there's no need to swap to all-IP transmission at once.

The good news for networks with upgraded first-generation TBS base stations is that it's also possible to equip them with TBCi units.

### Act now to maximise the benefits

Are you planning to purchase new base stations? Perhaps you are about to roll out new base stations? Or maybe you're planning a series of base station site visits? Whatever the case, it's worth ensuring that base station sites have TBCi units installed the next time engineers are on site. Once a TB3-series base station has the TBCi in place, it can adopt IP connectivity at any time, without the need for another site visit.

# On the RIGHT TRACK

Tracking vehicles, vessels or containers by GPS is not just about catching smugglers and criminals. It's also an important part of the everyday operations for many professionals, including public safety, transport and utility companies, among others.

The **TDR880i** data radio from Cassidian keeps controllers informed about its whereabouts, even when it's beyond the reach of the communications network. Using the special GPS Tracking Server functionality, a TDR880i can be configured to regularly save its coordinates at certain time intervals or over certain distances - or even both - and send the location information to a predefined destination as an SDS message.

If it's beyond the reach of network coverage, the radio saves the position data in its memory, and sends it to the controller once it reconnects with the network. The controller can them use it to piece together and document the entire route taken.

This contrasts with the common situation in which location information is lost if a radio travels beyond the network coverage area, in spite of the fact that GPS is independent of the network. The TDR880i's position storage capability and its ability to transfer the collected information when it contacts the network is a unique feature that provides considerable added value to user organisations.

The same tracking functionality is also available in the **TDM880i** data module from Cassidian.

# DID YOU KNOW ... you can rotate the radio volume?

Many users find turning a knob to be the easiest way of controlling volume, while others prefer to use the volume up and down buttons on the side of the radio. Did you know that you can please yourself with the Cassidian TETRA radios? From release 6.3 onwards you can choose which way to configure the radio.

If you want to control the volume by rotating the Group Selector knob, simply set up the rotary switch temporarily for this action using a short press of the Group selector or, in 880i-radios, the Back key in the middle. Volume bars will appear on the display and you're good to go.

If you are using a THR880i in the active holder on your lapel, it is very quick to adjust the volume because the Group Selector is easily reachable. Also, with THR9i models you can do it without looking at the display using the Group selector on top of the radio. After 3-5 seconds of inactivity, the rotary control returns automatically to the normal group selection mode.

Note that if rotary volume control is configured on your radio, the Back key is then dedicated to this function and you will not be able to select the previous group using a short press.

# TSIM offers improved flexibility

**Most people cram their personal mobile phones with personal information, such as their address book, old text messages and so on. But professional radio terminals are often shared among several users, so subscriber information typically relates to the job, rather than the individual. TETRA SIM cards offer the best of both worlds.**

In most cases today, all the information related to the TETRA subscriber identity is stored on the radio. This information typically includes group call definitions, as well as the keys for authentication and air interface encryption. At the same time, public safety organisations require enhanced flexibility and efficiency, while strictly confidential operations and the need for encrypted communication call for new operational models in the field. The TETRA SIM card solution (TSIM) can offer some benefits for TETRA users and user organisations addressing these challenges.

## Plug-in and go

A properly configured TETRA terminal no longer needs to store individual subscriber-related information. Only common subscriber data would be retained. At the start of each shift, the user takes a radio from the shelf and inserts his or her TSIM card, turning the radio into a personal tool for the duration of the shift. At the end of the day, the user removes the TSIM off and leaves the radio for the next user. This enables user organisations to pool radios among user groups.

If a terminal malfunctions, a TSIM card can be inserted to a new one and the TETRA subscriber identity remains the same, without the need for any additional configuration in the replacement unit.

## Instant encryption

In cases where end-to-end encryption (e2ee) is in use, the value of a combined TETRA SIM and TETRA e2ee Smart card is even more interesting. All the required information to enable encrypted communication is stored in a single SIM/Smart card. Where there is an urgent need to establish encrypted communication in the field, the user can insert a combined e2ee/TSIM card into the radio to enable both the TETRA subscription and e2ee. The radio can revert to its former use by removing the card after the operation.

Cassidian's complete solution for TSIM and e2ee covers infrastructure and terminals, as well as the related tools for solution programming and configuration. These include Taqto® and e2ee tools for terminal and encryption management, and Tactilon® for subscriber management.

For more information about the solution and existing customer references, please contact SCS@cassidian.com.

**With the transition from legacy analogue radio to digital communications relatively advanced across Europe, public authorities are more secure against eavesdroppers than ever. However, some operations demand an even higher level of privacy. End-to-end encryption offers extra protection, preventing even unauthorized personnel from within user organisations from accessing sensitive information.**

# Ultimate protection from eavesdroppers

The police and other public authorities increasingly rely on radio communications to transmit confidential information. Users therefore need a high level of security. While air interface encryption is common in digital radio communication systems, end-to-end security from terminal to terminal provides the ultimate protection for the most sensitive information.

End-to-end encryption (e2ee) is the state-of-art way to keep communications confidential in TETRA public safety equipment. E2ee complements the other open standard based security features built into TETRA, including air interface encryption, which takes place between the TETRA terminal and base station, and TETRA authentication, which takes place between the terminal and the TETRA infrastructure.

## Algorithms and keys

E2ee relies on encryption algorithms and encryption keys, which means that security operators need a secure and convenient way to deploy and manage them.

With Cassidian's e2ee solution, security information is stored in a security-certified smart card, making it easy for users to introduce e2ee into their systems and manage their encryption information. They only need to insert the smart card into the radio and the terminal is ready for encrypted communication.

E2ee supports various communication services over TETRA, including group and individual calls in trunked mode, as well as group calls in direct mode and encrypted SDS messages. What's more, encrypted voice communication is possible not only between radio terminals but also with dispatchers, where the multiGEM (General Encryption Module) encryption board uses the same e2ee smart cards as the terminals.

## Start to finish

The Cassidian e2ee solution starts with the terminals. Cassidian offers a comprehensive TETRA terminal portfolio with e2ee capability. The solution also incorporates smart cards, as well as PC tools for key configuration and card programming, both locally using a wired serial connection to the smart card and over the air, using e2ee OTAK

## Convenient and flexible e2ee solution

(Over The Air Keying) service for key updates.

The system supports two public encryption algorithms, AES and IDEA. One smart card can include up to 2024 encryption keys, giving the flexibility to change the keys in the field when necessary.

This adaptable solution allows user organisations to implement and master the solution in their own way. Because the user organisation manages its own security and communication polices and the related key configurations, card programming and logistics, it is independent of the network infrastructure, or of how other organisations using a shared network implement their e2ee.

If users already have Cassidian radios, they can upgrade them easily to support e2ee without hardware modifications. All they need is e2ee-featured software and a smart card.

And even if a user's terminal is temporarily out of use, a properly programmed back-up terminal can still provide e2ee functionality simply by inserting the user's personal smart card. Convenient and flexible, Cassidian's e2ee solution ensures effective radio communications security.



# **Three simple tips** for simple cyber security

Cyber security is mainly about keeping your computer out of harm's way. Employing common sense is the best insurance but there are particular things you can do to improve safety:

**1.** Always be sceptical in non-secure networks.

**2.** Be cautious when giving bank / credit card information online. Hoax emails are becoming ever more professional in appearance, so be wary.

**3.** Remember to install and frequently update the virus protection software on your computer.

Above all, be alert and critical when surfing the net – this will go a long way to protect your security.

# Get set for TWC 2012 in Dubai

**With more than 150 high-level speakers, 100+ exhibitors, 3,000+ visitors and 15+ streams, masterclasses and seminars, TWC can be a daunting prospect. Check out our survival guide for getting as much as possible from the experience**

Nobody can take in everything on offer at TWC in just four days, so make a detailed plan in advance to help focus on the topics and exhibitions that interest you the most. Review the agenda ahead of time and plan your days.

Don´t forget to leave enough slack in your schedule to engage in spontaneous conversations with like-minded professionals. Paper, a pen and a stack of business cards will help you organise follow-up discussions.

The average May temperature in Dubai exceeds 31°C celcius (88°F). Luckily the event is taking place indoors, but it´s still going to be warm, so remember to dress for it. Comfy shoes are also essential with so much to see and do all day.

The Burj Al Arab is the world's tallest hotel and one of Dubai's major tourist sights

TETRA World Congress will take place in Dubai this year on 14-17 May 2012. The biggest TETRA event of the year will once again attract PMR users, developers and other stakeholders from around the world. The main theme for the 2012 congress is "TETRA – Delivering Critical Communications Today and Tomorrow". Don´t miss this opportunity to network and find out about the latest developments in the PMR community. We´re looking forward to seeing you in sunny Dubai.

**Find out more about the 2012 event at: www.tetraworldcongress.com**

# BUILD YOUR **NETWORK MUSCLE**

**Opting for Release 6 of the TETRA system from Cassidian is like giving your system a workout. Why not use it to get your network into the best possible shape.**

## GET THAT DATA MOVING

New and more applications can be introduced to the network because Release 6 can handle more data. Operators can increase the network's capacity to handle SDS, and hence applications based on SDS, thanks to the introduction of secondary control channels and dedicated data channels.

What's more, these new applications use their own channel, so this extra data doesn't jeopardise the network's signalling capacity for voice calls.

## GET THAT DATA MOVING FASTER

Release 6 supports TETRA Enhanced Data Service (TEDS), so it is an ideal platform for high-speed data. With TEDS, data speeds reach a whole new level.

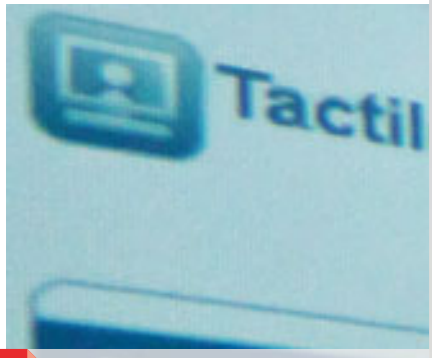
## GIVE THE RIGHT RIGHTS

The signalling for mission-critical operations can be guaranteed because Release 6 introduces more control channels. In addition, it also improves on pre-emption – individual radio users, workstations and groups each have different pre-emption rights so that the most important traffic will always get through.

## KEEP BETTER TRACK

Release 6 helps network operators to keep track of their technical operations more easily, with better statistics and easier network configuration.

Release 6 continues the process of making TETRA networks more secure, efficient and easy to run, all while driving down the total cost of ownership. For example, Estonia's nationwide authority network is already reaping the benefits, thanks to its recent upgrade to Release 6.0 system software.





# TACKLING THE TACTICAL PRESSURES

**Operators of public safety communications networks face demands from all directions. There's constant pressure to bring more end users 'into the loop' of critical communications, and to provide the maximum flexibility for each user organisation to set up its communications as it pleases. At the same time, there's more pressure than ever to save money. The Tactilon™ tool from Cassidian helps operators meet all these conflicting demands.**

Tactilon is a tactical management solution for public safety networks. It enables operators to manage users en masse, saving time and money. It also gives user organisations more flexibility in managing their own organisational units, talk groups and subscribers. It even improves security in shared TETRA networks, because only authorised personnel can use Tactilon to manage the subscribers and services that they have approval for.

The Tactilon tool introduces a system of profiles that allow different users to be given different communications attributes according to their scope of work. For example, a police car profile and a mobile border guard profile could each be defined once and then applied to any number of users as appropriate. Numbering, talk groups, priorities, rights, and so on can all be managed in this way. In addition, to further optimise the daily work Tactilon introduces profiles not only for subscribers of the TETRA




network but also for talk groups, dispatchers and Tactilon users.

Tactilon is particularly useful when introducing a new set of features to a TETRA network, or when a new group of users needs to be provisioned to the TETRA network.

User organisations can access Tactilon via a simple web-based interface, without the need to install any specialised equipment.

With thousands of users on a typical TETRA network, managing every user individually is an enormous and time-consuming job. Cassidian's Tactilon has the answer – it's simple, reduces the workload and cuts costs substantially.

### Tactical management demands specialist tools

Tactical management is all about making the best of the available resources. So to achieve full control, a tactical management tool has to provide easy access to data and a user experience that helps provide field commanders with better situational awareness. It is essential to have control of all resources to be able to make decisions and perform the appropriate actions in response. In addition, the tool has to be fast and easy to use. All actions must be recorded and provide a proper facility for feedback, thereby completing the control-decision-action-feedback loop.

Since a TETRA network is very often shared by different organisations, internal confidentiality must be guaranteed. Different user organisations want to control their own resources as they see fit, and they want to rely on the fact that no one outside their organisation can see or modify their communications set-up.

External security is even more important, and it's absolutely essential that users can be confident that only authorised personnel can carry out tactical management tasks within the TETRA network.

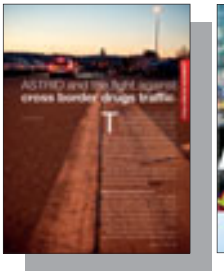
With all these requirements in mind, there are several critical issues to consider when looking for the right tactical management tool.

- **Security and confidentiality.** Management must be efficient and must guarantee confidentiality between different organisations. Access to the system must be closely controlled to prevent unauthorized use, with even tighter control over the access points that provide the ability to perform management tasks. The system has to control who accesses the system (authentication) and what that person is allowed to do (authorisation). A state of the art system controls the management rights based on role or profile.
- **Control of resources.** The tool should provide easy access to all manageable objects, with a fast and reliable search option across the available resources. As an operator or field commander you have to be able to see what you have, know what you want to do and be aware of what's been done in order to have full situational awareness.
- **Mass operations.** It should be fast and easy to perform changes or create new objects en masse with a few clicks. Existing resources should be easy to modify based on search results or with the help of standard profiles.
- **Integration with other systems.** Tactical data is used in a number of different systems, for example, in a Terminal Management tool, thus any tactical management tool has to support flexible interfaces to share the data with other systems.
- **Future proof.** Many public safety organisations are exploring their options for providing data services and broadband data will soon be an everyday part of life on TETRA networks. Tactical management tools must therefore be future proof to support the evolution of emerging access technologies and features that will support new ways of working.

# What you liked best in Key Touch 3/2011

You voted for your favourite article in Key Touch 3/2011. "Four-year old boy is 9-1-1 hero" appealed to the most voters. This article featured an unusual hero from real life, a little boy who knew what to do in an emergency.

There were three runner-up articles with the same number of votes, and they, too, had a human theme. "ASTRID and the fight against cross border drugs traffic" described a special operation by Belgian customs. "Myth-buster - 5 wrong ideas about TETRA in medical care" was based on real-life experiences in a Finnish hospital, and "Cassidian becomes more global – in a local way" featured Jean-Marc Nasr in an interview.





## GIVE US FEEDBACK AND WIN A PRIZE!

**Let us know** what you think about the latest issue of Key Touch magazine by voting for the best article. Visit **www.keytouch.info** and tell us what you think. You could even win a prize!


# City of Richardson welcomes advanced P25 LMR system at 'a fraction of the cost'

The City of Richardson, Texas, has declared its acceptance of its new Cassidian CORP25 digital, Land Mobile Radio (LMR) communication system. The solution includes hardware, software, system engineering, installation and optimization, as well as long-term managed services and round the clock maintenance and support.

Selected to replace an ageing analogue system and based on open APCO Project 25 (P25) standards, the CORP25 radio network is the industry's only true non-proprietary P25 LMR solution. The interoperable system has allowed the city to procure its mobile and portable radios as well as other key network elements on the open market, allowing it to choose best-in-class equipment from multiple vendors at the best price.

**Full value from open standards**

"Open standards enabled us to use new strategies in purchasing, which saved substantial amounts of money in comparison to the old fashioned, one vendor approach to purchasing," said Steve Graves, chief information officer for the City of Richardson. "The CORP25 system is based on the purely open-standards model we were looking for, and the gear is compact, well-suited to our data-centric environment and of the highest quality."

Chuck Sackley, vice president of business development for Cassidian Communications Land Mobile Radio, said: "The City of Richardson has demonstrated the true value of open and standard procurements, and has proven what responsible government can achieve on behalf of its taxpayers. It obtained a best-in-class solution for a fraction of the original cost estimates and was able to put those cost savings back into the community."

The Cassidian CORP25 system is based on advanced IP technology, which allowed the City to easily integrate it into its existing data networks and data centers. Flexible and scalable, the CORP25 radio solution offers the City of Richardson the power of true choice, simple and efficient network management and cost-effective migration to future applications and services.

A customer of Cassidian for more than 20 years, the City of Richardson already uses Cassidian's VESTA® emergency call processing solution, the MagIC™ management information solution, the ORION™ MapStar™ mapping solution and the REVERSE 911® emergency notification system. With the final acceptance of the CORP25 solution, Richardson's public safety communications network is now able to handle more than 7,000 calls in an average day.

Т-ХЕЛПЕР


T-Helper team in -51°C

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

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

The East Siberia-Pacific Ocean pipeline system (VSTO) is still under construction. When complete, it will connect the oil fields of West and East Siberia with the oil loading port of Kozmino in Nakhodka Bay and the Primorsky oil refinery plant near Nakhodka.

# SECURED:

# WORLD'S LONGEST

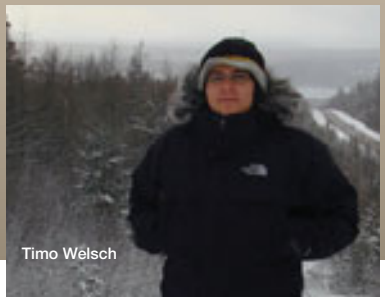
The first leg of the VSTO pipeline has its communications system already in place. T-Helper, Cassidian's value-added reseller in the area, has set up the system with support from Cassidian.

In the unique, vulnerable Siberian environment, the TETRA radio network helps monitor any incidents that may occur and limit the consequences of any leak along the route.

# OIL PIPELINE

All the equipment faces extremely challenging conditions, and bad weather can prevent access to some base stations for months at a time.

Timo Welsch, Technical Support Engineer from Cassidian has experienced the cold weather in Siberia. "I had to buy warmer clothes before my trip," he says. "My normal winter gear is OK for the Frankfurt winters, but not for Siberia, where the coldest day during my stay was -41°C."



Timo Welsch

"The people were very friendly," Timo remembers. "But it was absolutely too cold! When outside, I had to keep moving, or go indoors every 10 minutes to warm up. I was lucky, though, since I did not have to work outside."

# Your best choice

**The way you prefer to use your radio defines which accessories are the most suitable for you. To get the ultimate user experience, make your best choice out of the wide range of accessories for your Cassidian radio. A well-equipped radio is a pleasure to use. It is all for your convenience!**

**For more information, take a look at**
**www.cassidian.com/radioaccessories**